CATALOGUE OF THE ROMAN AND BYZANTINE COINS

IN THE

MADRAS GOVERNMENT MUSEUM

By
T.G. ARAVAMUTHAN, M.A., B.L.,
Advocate, High Court of Judicature
Sometime Curator, Numismatic Section
Government Museum
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FOREWORD

The coins in the collection of the Government Museum, Chennai have been acquired as treasure trove hoards, gifts and through purchase from all parts of India during the early period of this museum.

The result of research work done on the various types of Indian and foreign coins in our cabinet by eminent scholars have been published in the form of Bulletin by the Museum regularly.

Thiru T.G.Aravamuthan M.A, B.L., a lawyer of the Madras High Court and sometime Curator of Numismatics of this Museum during the 1930s has written a Text on Roman and Byzantine coins. In this work, using an inter-disciplinary approach, he has described the features of the history of Roman and Byzantine coins.

A thorough investigation of the data relating to the finds was undertaken to decide their provenance. A detailed description about the Roman dynasties and about the coins were given by him in this text. The manuscript, a discussion of Roman Coins found in India and their find spots, was in a galley proof condition. It was not a complete catalogue of the coins. In spite of this, it was published in a form of a catalogue in 1942 AD with all the available information provided by Thiru T.G.Aravamuthan himself.

The present publication also is the reprint of the 1942 AD edition. This will serve as a valuable tool for the study of Roman and Byzantine coins for the scholars of Indian Numismatics.

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Kannan

(Dr.R.Kannan,Ph.D., I.A.S.)

INTRODUCTION

GENERAL.

Finds of Roman and Byzantine coins in India have been reported for over a century and a half now, and the finds number almost a hundred. But the discoveries having been made in a country where facilities for accurate study of the finds are greatly lacking, and the reports on the finds having had to be prepared, except on rare occasions, by persons who have had no special knowledge of Roman coins and were, at best, amateurs in numismatics, the data that we have suffers both from incompleteness and indefiniteness. The mass of material available, however, being large, it was tempting to subject it to scrutiny, in spite of the unsatisfactory character of at least some part of the data, and, in 1904, the material,—such as it was,— was subjected to critical examination and appraisement.[1] A number of interesting finds having come to light since then, a fresh examination of the data has become desirable.

No Indian province has yielded up so many Roman and Byzantine coins as Madras, nor have finds been made in any other province so often and at so many places. The Government Museum at Madras, having been for the past fifty years entitled, under the law relating to treasure trove, to examine finds and to acquire such of them as may be needed for the purposes of numismatics, has been able to put together a representative collection of specimens of the Roman and the Byzantine coins found in the province. Some of the coins were secured before the law relating to treasure trove was clarified and codified,[2] and a few others were acquired by purchase. Many of the coins which came in when finds were acquired *in toto* went out as gifts to similar institutions or were exchanged against or were sold to the public : some were unfortunately lost.[3] The collection now preserved in the Museum consists of 208 coins,—of gold, silver and 'brass.'

When this *Catalogue* came to be prepared, a thorough investigation of the data relating to the finds in the province had to be undertaken as it was necessary to decide points of provenance.[4] For an understanding of the distribution of the finds in the province, which, as now constituted, is not a homogeneous unit, the finds in other provinces too had to be studied. If the study was to be fruitful, it had to be detailed and complete : a full and up-to-date list of the finds had to be drawn up, a Corpus of the coins found had to be prepared, and every coin had to be identified with as much precision as the available material permitted of. It was anticipated that the Corpus would help to clarify many moot points ; indeed, it was in that expectation that its preparation was started on. But when the Corpus came to be completed it was found that it serves a purpose that had not been previously thought of. It has become a manual of Roman and Byzantine numismatics of special value to the Indian student : though far from being a guide to a representative collection of Roman and Byzantine coins, it is as comprehensive an index to the coins that came to India as a century and a half of investigation in India could offer. The Corpus would have had in any event to be incorporated in this *Catalogue* as it forms the basis for the numismatic investigations that follow, but its inclusion is justified for the additional reason that it forms a handy guide to the coins that have occurred in this country in the past one hundred and fifty years, and therefore are likely to occur again. The need for such a manual has been felt often by numerous collectors in this country where useful handbooks on numismatics are rarely procurable.

The *Catalogue* describes in detail the coins which are now in the cabinets of the Museum. A look at it shows the special pains bestowed on indicating the extent to which a legend has gone off the flan or has suffered wear or corrosion : the object is to meet the needs of Indian collectors. The alphabet of the legends, the Roman, is reasonably familiar to those in India into whose hands the stray finds in the country are likely to go, but the language, the contractions, the titulatures and the peculiarities of dating are unfamiliar and often unintelligible to them, and they can scarcely read and understand a legend, even where it is clear on the coin. The legends being often worn or corroded, and portions of them being off the flan, no more than fractions of the legends are decipherable by the layman and in this country the types evoke no recollections ; so they fail of interest. But it is on the layman in this country that numismatics has to depend for its progress, for only a few of the finds made annually reach the knowledge of the authorities administering the law of treasure trove : distances being great, specialists being few and amateurs having no facilities to turn their enthusiasm to account, every coin that is discovered has a tendency to gravitate to the melting pot. A *Catalogue* of coins has little practical utility in this country unless it is so modelled as to enable the layman to identify without undue effort the coins he may come across. Hence it is that in transcribing the legends on the coins in this collection it has been considered essential to indicate clearly the portions that have gone off the flan or have become worn or corroded : no other method can teach 'the man in the street' that he may find gaps in the legends on the coins he collects and at the same time teach him how to fill the gaps. The specialist

in Roman coins interested in the minutiæ of his subject may not fail to appreciate the pains taken to indicate differences in small points such as punctuation and the interspacing of letters and words. These details are overlooked when large collections such as those preserved in the great national collections in Europe are passed in review ; they can receive due attention only when a small collection such as this one is studied.

The Corpus incorporates every detail known about each coin ; its date, its provenance, the metal of its substance, its condition, the mint from which it issued, the number of companions of the same variety as itself which it had in the same hoard, and the other companions of other varieties with whom it was associated. Where a coin appears to differ from a variety known to the standard authorities, the variation is noted ; where a coin is an imitation of a regular issue, the original of which it appears to be an imitation is referred to and described as fully as may be necessary to explain the imitation. The arrangement being chronological, the Corpus helps us to keep track of the evolution of Roman coinage and of the course of the influx of Roman coins into India. To facilitate the grouping together of coins found not far from each other, the Corpus shows the country divided into a number of regions[5] and reference is given to the region in which a coin was discovered.

One of the main purposes of the Corpus being to bring together all details likely to be of help in studying the constitution of the various hoards discovered as finds in the country, the essential details have been tabulated in the section entitled 'Analysis of Indian Hoards.' The Analysis is both chronological and regional. The reader will find that reference to this Analysis will enable him to follow with ease the discussion of problems relating to finds and the influx of these coins into this country. The Indian student of Roman coins has little competence to tackle at least two problems which the Analysis brings to the fore : he can scarcely pretend to explain why a hoard begins at a certain date, nor can he determine why the coins in a hoard occur in the proportions they do. Only finds in Europe and in the lands immediately adjacent can determine conclusively how long an issue persisted in circulation and how far it ranged abroad, in what circumstances the issues of different mints mingled together, and at what rate and in what volume the mints emitted the various issues. It is hoped that the data brought together in the Corpus and in the Analysis will enable European specialists to compare the constitution of the Indian hoards with that of hoards nearer Rome and to determine if there are any variations and if such variations as there might be throw any light on such points as the volumes in which the several issues were emitted and the course or the character of the intercourse of Europe with India.

The range of the hoards, both in time and in space, has been graphically represented in a 'Chart of Hoards,' which shows at a glance a few of the essential facts relating to the hoards that should enable us to study the growth of the intercourse between the two countries.

The need for inducing the layman in this country to engage in collecting these coins has led to the inclusion in this work of a short sketch of Roman and Byzantine numismatics. No more than the rough outlines of the subject could be traced within such short compass, and even important aspects of the subject have been glossed over where they are unlikely to interest the Indian reader. In view of the finds in this country starting with coins as late as the close of the 2nd century B.C., no attempt has been made to deal with the beginnings and the early course of Roman coinage. The European reader is charitable enough to need no special request that he will ignore this section of the Introduction.

Again, for the sake of the layman in this country a chronological list of Roman emperors is provided. The difficulties due to the use of agnomina and cognomina in the coin legends have been sought to be eliminated by including in the name of each emperor the characteristic agnomen or cognomen. The slight confusion that attends the overlapping of the reigns of conjoint emperors has been sought to be obviated by the adoption of typographical devices showing graphically the extent of the overlaps.

For a completely satisfactory treatment of the problems raised by the influx of Roman and Byzantine currency into India a thorough study of the finds in Ceylon is indispensable, for Ceylon in those days was by no means an entity distinct from India. The Ceylon finds, however, require to be studied as industriously as the finds that have come to light in India, and it is to be hoped that the investigation will be undertaken at an early date by some scholar in Ceylon who commands greater facilities than anyone in India. If I may, however, venture on a forecast on the basis of such attention as I have been able to bestow on the finds in that island, I believe that the conclusions arrived at here are likely to stand confirmed.

Some of the shortcomings of this work are due to the difficulty of obtaining in this country the necessary *apparatus critici*: Cohen's work, for instance, did not become available till much of the work of cataloguing had been done, and, it is believed that the only set of the work available in all this land is the one I have used. This is an index to the conditions in which the investigations have had to be pursued. Many of the defects, however, are due to my not having a special knowledge of Roman or Byzantine numismatics. I am confident that the data brought together in the *Catalogue* and in the Corpus will in more competent hands yield more and better fruit.

The basis of this *Catalogue* is a hand-list of Roman and Byzantine coins in the cabinets of this Museum prepared by my predecessor in office, the late R. Srinivasaraghava-Ayyangar, who died unfortunately before he could take it up even for revision: in revising the list I have preferred, in the interests of uniformity of description, to follow closely the language of Mr. H. Mattingly in his *Catalogue of the Roman Coins in the British Museum*. I am under considerable obligations to Mr. Mattingly, who has been good enough to identify many coins for me, including many of those of the Gumada find, and to advise me on points of difficulty. But for his kindly help I should scarcely have been able to prepare portions of the *Catalogue*. The responsibility for all the rest of the work is solely mine.

FINDS OF ROMAN AND BYZANTINE COINS IN INDIA.

The earliest of the modern references to Roman and Byzantine coins having been found in India appears to be a notice by a traveller who had collected some during his stay in the country between about 1775 and 1778 A.D.[1] Since then a large number of the coins have been collected by antiquarians and a much larger number have been brought up by the pick and the spade. A list of the finds of Roman coins in India was drawn up about 1904[2], but as further coins have since come to light an attempt has been made to gather and digest the information available in respect of all finds of the coins in India.

NOTICES OF FINDS.

Notices of finds of coins in this country are recorded below: they are arranged chronologically. Where only the date of the earliest *notice* of a find is known the date is followed by the letter *n*. The location of each find-place has been given as accurately as the available information has permitted. To facilitate citation, each find is referred to by its number preceded by the abbreviation F., and each find-place is indicated by an abbreviation of the name of the place: if only the name of the District or the Tahsil has been recorded, the abbreviation D. or T. has been added. Where more than one find has been made at the place, the letters *a, b, c, d,* . . . are suffixed to the abbreviation to distinguish the finds.

The details of the composition of each find in so far as they have been recorded, are analysed in the Corpus. An Appendix has also been added in which an Index has been furnished in regard to the coins comprised in each hoard.

(1) 1775–8. SURAT tn., Surat dt., Bombay pr. [SU

'Ancient Grecian and Roman copper coins are likewise sometimes met with here'.[3]

(2) 178—. NELLORE (near), Nellore dt., Madras pr. [NED

'A peasant near Nelor . . . was ploughing on the side of a stony craggy hill: his plough was obstructed by some brickwork; he dug and discovered the remains of a small Hindu temple, under which a little pot was found with Roman coins and medals of the second century. He sold them as old gold, and many no doubt were melted, but the Nawab Amir-ul Umara recovered upwards of thirty of them. This happened while I was Governor (of the Madras Province), and I had the choice of two out of the whole. I chose an Adrian and a Faustina. Some of the Trajans were in good preservation. Many of the coins could not have been in circulation; they were all of the purest gold, and many of them as fresh and beautiful as if they had come from the mint but yesterday; some were much defaced and perforated, and had probably been worn as ornaments on the arm, and others pending from the neck.'[4]

(3) 1800*n*. POLLACHI, Pollachi tk., Coimbatore dt., Madras pr. [Po

'In this vicinity was lately dug up a pot, containing a great many Roman silver coins.' Six of these were examined; 'they were of two kinds, but all of the same value, each weighing 56 grains.'[5]

(4) 1800. COIMBATORE DT., Madras pr. [CoD*a*

A find of gold coins was made in the neighbourhood of Coimbatore.[6]

(5) 1801. KANGAYAM, Dharapuram tk., Coimbatore dt., Madras pr. [KY

'There are, among some old papers of Colonel Mackenzie, drawings of several gold and silver coins found at Kongyam, and other places in the neighbourhood of Coimbatore'.[7]

'A sketch' was 'found among the late Col. Mackenzie's papers of "gold and silver, imperial coins found in Coimbatore", the latter in Kongyam in 1801. Of these there are 10 drawings all of silver denarii',[7] of the same types as Nos. 1 and 3 of Pollachi.

(6) 1803c. PENNAR, Coimbatore dt., Madras pr. [Pe

'A pot full of' punch-marked purans coins 'was dug up at Pennar . . . in the Coimbatore province[8] among which was found a silver denarius of Augustus.'[9]

(7) 1806. KARUR, Karur tk., Trichinopoly dt., Madras pr. [Kra

Five Roman gold coins were found.[10]

(8) 1817n. COIMBATORE DT., Madras pr. [CoDt

'Mr. Garrow, a former Collector of Coimbatore, in a letter dated 1817 . . . alludes to a silver coin of Augustus found in one of the old tombs called Pandu Culis with a large number of the irregularly shaped punch coins, met with in all parts of India'.[11]

'There are, among some old papers of Colonel Mackenzie, . . . a letter from Mr. William Garrow, then Collector there (in Coimbatore), which states, that a silver coin of Augustus had been found in one of the ancient sepulchres called Pandaculis ; while from another were obtained a number of the irregularly shaped silver coins, stamped with punches, common to the southern districts of India.'[12]

Another account runs with a variation : 'Roman coins have been previously (previous to 1843) found in the district of Coimbatore, and the late Collector there, Mr. William Garrow, states that a silver denarius of Augustus was discovered in one of the ancient sepulchres of the country called Pandukals whilst a number of irregularly shaped silver coins, stamped, by means of a punch, with various devices, and not uncommon in Southern India, were obtained from another of the same tumuli'.[13]

(9) 1817. ALAMPARA, Madhurantakam tk., Chingleput dt., Madras pr. [Al

A collector of coins[14] went to this village, for a 'woman who had formerly discovered some Roman Gold coins' had 'promised' him 'any others she might find'. She had since found none, though 'she had been searching every morning and evening with her bags'. But, 'as before when she had found two Ancient gold coins (supposed to be Roman), on that height, she made no doubt but that she might procure some other coins' if he came later. He came back some four months later, and 'visited the old Fishwoman', but she failed him. He 'then employed some Fishermen and tried till one o'Clock upon that height and procured one Roman Copper Coin, and some others'[15]

(10) 1827c. OOTACAMUND, Nilgiris dt., Madras pr. [Po

When 'the foundations of the house on the hill to the south of the lake now called Bishopsdown' were being dug, 'a gold Roman coin was' discovered.[16]

(11) 1832n. UPPER INDIA [UIa

'The contents of the (Bengal Asiatic) Society's cabinet . . . , which, although it boasts but a very insignificant collection of Roman coins, and those mostly without any record of the exact localities in which they were found or of the parties who presented them, is entitled to some interest from the circumstance of the Indian origin of all that it contains'.[17] In the cataloguing, 'several that were the private property of Mr. Wilson, Col. T. Wilson' or J. Prinsep, 'found in different parts of India' were also incorporated[18]

(11-a) 1832n. INDIA. [In

'Among the chief collections of coins made in this country', was 'a large collection of copper coins, chiefly Mahommedan, but many Roman, made by Dr. R. Tytler, and presented by him to the 'Honorable the Court of Directors' of the East India Company.[19]

(11-b) 1832n. DIPALDINNA. [Di

Another of 'the Chief collections of coins made in this country' was that 'of the late Colonel Mackenzie, which contained a few curious Hindu pieces, and a vast number of the copper coins of the south of India, many modern, but some ancient, including Roman coins dug up chiefly at Dipaldinna and Amaravati, near the Godavari'.[21]

(11-c) 1832n. AMARAVATI. [Am

[See No. 11-b above.]

(12) 1832. KANOUJ, Kanauj tk., Farrukhabad dt., United Provinces. [KJa

A Roman copper coin was obtained here.[20]

(13) 1832n. KANOUJ, Kanauj tl., Farrukhabad dt., United Provinces. [KJb

A copper coin of Diocletian was 'procured' here.[22]

(14) 1832n. CHUNAR tn.—tl., Mirzapur dt., United Provinces. [Ch

A copper coin of Numerianius was collected here.[23]

(15) 1832n. ALLAHABAD tn.,—tk.,—dt., United Provinces. [Ab

'Many of the Diocletian coins . . . in the (Bengal Asiatic) Society's cabinet . . . were collected at Allahabad, Mirzapur and Bindachal'.[24]

(16) 1832n. MIRZAPUR (near), Mirzapur tl.,—dt., United Provinces. [Mia

A brass coin of Carinus 'was dug up in the neighbourhood'.[25]

(17) 1832*n*. MIRZAPUR tn.,—tl.,—dt., United Provinces. [M*ib*
[See under ALLAHABAD, No. 15 above.][16]

(18) 1832*n*., BINDACHAL tn.,—included in Mirzapur tn.,), Mirzapur tk.,—dt. United Provinces. [Bi
[See under ALLAHABAD, No. 15 above.][17]

(19) 1832*n*. MAHABALIPURAM, Chingleput tk., Chingleput dt., Madras pr. [MP*a*
An obolus of Theodosius was found here, 'along with several others, bearing the same device, but of a smaller size.'[18]

(20) 1833*n*. UPPER INDIA. [U*ib*
'Twelve Roman copper coins, in fine preservation' were 'stated to have been found buried in Upper India. The collection comprises coins of Domitianus, Gordianus, Gallienus, Salonina his wife, Posthumus, Victorinus, Claudius Gothicus, Tacitus, Probus, Maximianus, Constantinus, and Theodosius.'[19]

(21) 1834*c*. MANIKYALA, Rawalpindi tk.,—dt., Panjab pr. [MK*a*
In the cell of the stupa covered by mound 'No. 2' in the village 'stood a copper urn, encircling which were placed symmetrically eight medals' of copper . . . . The copper urn enclosed a smaller one of silver: the space between them being filled with a paste of the colour of raw umber' . . . (which) was light, without smell, and still wet . . . Within the silver urn was found one much smaller of gold, immersed in the same brown paste, in which were also contained seven silver medals, with Latin characters. The gold vessel enclosed four small coins of gold of the Graeco-Scythic or Graeco-Indian type;— also two precious stones and four pearls . . . (being) the pendents of earrings . . . (The silver coins) are worn as if they had been a long time in circulation'.[20]

(22) 1838*n*. COIMBATORE DT., Madras pr. [CoD*c*
'In 1838, Mrs. Marsden presented two denarii to the British Museum,[21] stated to have been found at Coimbatore'.[22]

(23) 1838. ATHIRALA, Pullampet tk., Cuddappa dt., Madras pr. [AT
An aureus of Trajan 'in fine preservation' was 'picked up by a woman gathering sticks on the side of a stony hill near the village.'[23]

(24) 1839. TIRUMANGALAM TK., Madura dt., Madras pr. [Ti T*a*
'A solidus of Zeno was found in company with three or four of the pagodas called Animitti from their bearing the impression of an elephant and with several silver coins[24] . . . at the foot of an insulated hill in the Tirumangalam Talook . . . the Roman coin has been pierced to be worn as an ornament.'[25]

(25) 1840. DHARPHUL, Sholapur dt., Bombay pr. DH
'Eighteen aurei of Antoninus Pius and Severus, weighing from 107 to 120 grains, were found in June 1840 . . . They were discovered in a small earthen pot . . . When cleaned, they turned out excessively well preserved. Some had been bored, to be worn as ornaments in the country.'[26]

Another account has it that 'only eighteen' coins of the hoard 'were secured, chiefly of the reign of Severus, but a few also of Antoninus, Commodus, Lucius Verus and Geta. Drawings of a few have been seen.'[27]

Yet another account says that 'a few specimens only were secured and proved to be aurei of Severus, Antoninus, Commodus and Geta.'[28]

(26) 1841. VELLALUR. [VE*a*
'In the year 1841, a considerable number of denarii were found, while digging out the foundations of some houses 'on some Sarampoke[29] lands appertaining to the village. . . . They were 523 in number . . . The arrangement of the coins, according to a memorandum drawn up by Mr. Elliot, is as follows: 1. Of the time of Augustus there are 132, and one which has been broken in half, and counted as two; their type a very common one' (Corp. 85); 2. Of the reign of Tiberius there are 381, all of them of one of the commonest types of that emperor (Corp. 137); 3. Of the reign of Caligula there are three, two (Corp. 165) and one with the head of his father, Drusus; 4. Of the reign of Claudius there are five, also of common types, such as PACI AVGVSTÆ, with victory pointing with a caduceus to a serpent; a female figure seated on a chair and SPQR PP OB CIVES SERVATOS, in an oak wreath. . . Of these coins, 210 have been sent to the British Museum for inspection. They may be arranged as follows: (1) Six, corresponding exactly with those described under the head of Augustus. (2) Two hundred and four agreeing with those of Tiberius. None have as yet arrived of the reigns of Claudius and Caligula. It is remarkable, that though all these denarii are of the same type, still that there are not *two* which can be considered as from the same die. Their variations are chiefly as to the form of the curule chair, one of which occurs with hardly any back to it; some very richly ornamented; and, in one case, apparently without any back at all.'[40]

Also CONSTANTIÆ AVGVSTI

'Remarkably enough, out of so large a number, all but a dozen, . . . were coins of Augustus and Tiberius, the exceptions being of Caligula and Claudius.'[41]

Another account runs thus: 'In the month of May, 1842, after a heavy fall of rain, an earthen pot was discovered in a piece of waste land belonging to the village . . . which on examination was found to be filled with silver coins. When brought to the Collector, they were found to be Roman denarii, 522 in number, chiefly of the reigns of Augustus and Tiberius with a few of Caligula and Claudius. The earthen vessel in which they had lain was like the common terra-cotta *lota* of the present time. . . Only eleven different types were found to occur in the large number of coins above mentioned.'[42]

(27) 1844*n*. CORÓMANDEL COAST, Madras pr. [CC.

'Roman coins are frequently picked up along the sea-shore, to the South of Madras, on mounds of sand distant about 5 or (?) miles apart, on the surface of which they are discovered after high winds or heavy rains. They are mostly oboli worn so smooth as to leave little more than the head and device discernible. The legends of Valentinian, Theodosius and Eudocia, have however been read. Old Hindu and Chinese coins are met on the same spots.'[43]

Writing almost thirty years later, the same authority referred to 'the existence of great numbers of Roman coins occurring with Chinese and Arabian pieces along the Roman coast . . . These are found, after every high wind, not in one or two places, but at frequent intervals.'[44]

Writing, again, twelve years later, he said: 'Along the Coromandel coast, from Nellore as far south as Cuddalore and Pondicherry, a class of thin copper die-struck coins, which, (is) not directly connected with the Andhra type . . . They are found in considerable numbers in or near dunes and knolls in the vicinity of the Kupams or fishing hamlets that stud the shore, together with Roman oboli, perforated Chinese coins, bits of lead and other metal, bèads, fragments of charcoal, etc. These are collected by the wives and children of the fishermen after gales of wind or heavy rains, and purchased from them by the itinerant pedlars called Labis and Merkayars, in exchange for useful necessaries, by whom they are sold to braziers and coppersmiths. . . The Roman coins are all of the smallest value, and are generally worn smooth, but on two or three the names of Valentinian and Eudocia have been read.'[45]

(28) 1847*c*. KOTTAYAM., Kottayam tk., Malabar dt., Madras pr. [Koa

'Certain Syrians residing at Keeloor Dashom in Palashy Amsham of the Cotiacum taluk were in the habit of collecting gold from the bed of the river Vanienkudavoo (by taking the sand and sifting it), which was between Keelaloor Dashom and Vengador. One day, whilst they were engaged in digging the bed of the river, a number of gold coins were found in a part where there was a mixture of sand and mud. These were lying buried in the ground, but not in a vessel. A great quantity was taken, but nobody knows how many. Some suppose that these might have been buried here in bags, which have been destroyed. . . During the hot season, there is water equal to a man's depth, whilst in the monsoon there is depth equal to four or five men. The stream runs through one side of the dry bed of the river, whilst the other is so filled up with sand that it is like an island. Below this island on the other side there is another current resembling a small canal, which is the place whence the coins are taken. Certain Maplamars of Curvoye taluk, hearing of the discovery of gold at this canal, proceeded thither and tried to collect some, and it is said that they also got some coins. Although what these people got is not so much as taken formerly by others, nobody knows what was the exact quantity.'[46]

The find is 'not only remarkable for the numbers found (amounting to some hundreds), but also for their wonderful state of preservation. Many appear almost as fresh as on the day they were struck—the outline of the figures is so sharp and distinct, and the inscriptions so clear and legible. With very few exceptions, they are all of gold . . . it seems that a few were brought into the town of Calicut and offered for sale in the bazaar by some poor natives, who naturally supposing from their shining appearance that they, were worth perhaps some trifle gladly bartered them away for a day's feed of rice. The coins however, speedily, found their real value, and the natives, those who were not long in estimating their real value, and the natives, finding that some importance was attached to the glittering metal, began to rise in their demands, and at length sold them for one, five, ten, and subsequently, for fourteen rupees the coin. The purity of the gold especially attracted the notice of the jewellers and the wealthier natives, who purchased them for the purpose of having them melted down for trinkets and ornaments, and many, it is to be regretted, have been irretirevably lost in this way. The secrecy at first so carefully maintained by the natives in respect to the spot whence they brought them rose in proportion to the eagerness with which the coins were brought up and for a long time all endeavours proved fruitless in ascertaining the precise

locality wherein they were found. It now appears that they were accidentally discovered in the search for gold dust by the gradual clearing away of the soil on the slope of a small hill in the neighbourhood of Kottayam, a village about ten miles to the eastward of Cannanore. A brass vessel was also found, in which many of the coins were deposited. For a length of time the numbers appear to have been very great, and it has been stated that no less than five coolie loads of gold coins were dug out of the same spot. . . It is found, impossible to make any correct calculation as to the numbers which have actually been but it might be mentioned that about eighty or ninety have come into the possession of His Highness the Raja of Travancore, and a still greater quantity has been collected and preserved by General Cullen, Resident in Travancore, while even after the lapse of more than a year from their first discovery they are still procurable from the natives in the neighbourhood of Tellicherry and Calicut. The most numerous examples which occur are those of the reign of Tiberius, and next to that emperor those of Nero.'[47]

The results of an examination of the batch of coins that went into the hands of the Maharajah of Travancore have been summed up thus: 'All are in good preservation, with the exception' of Corp. 71, 77, 'which are partially obliterated. A duplicate' of Corp. 229 'is also considerably worn. Several of the coins appear as fresh as if they had but recently issued from the mint. . . the whole of the coins . . are said to have numbered several hundreds, all gold-coins, and all it is supposed Roman Imperial Aurei.'[48]

One of the Kottayam coins had gone into the hands of Dr. Kennet from whom it was acquired for the Madras Museum.[49]

(29) 1856. KALIYAMPUTTUR, Madura dt., Madras pr. [Kp

'In a piece of waste land belonging to the village . . . a pot of very beautiful gold coins, bearing the heads of Augustus and other early Roman emperors, has been discovered . . . The persons . . . by whom they were found . . . are tank diggers' who 'were employed in excavating brick earth. The coins were packed in an earthen pot about the size of a large mango, which unfortunately is broken. The original number was 63, of which 4 are not forthcoming and two are reduced to ingots, leaving 57 in excellent preservation, with the heads and inscriptions exceedingly distinct. The pot was found about ½ foot below the surface of the ground adjacent to the bank of the Shunmoogum Nuddy River, which is near the boundary of the Madura and Coimbatore Districts.'[50]

'Mr. (Walter) Elliot read a notice of the Gold Coins stated . . . to have been found at Madura. They comprise 49 specimens, of which 28 have been bought for the Government Central Museum, 20 were purchased by a Gentleman at Madura and sent home, and a single one was obtained by Mr. Elliot himself. The whole are gold pieces of the kind called aurei, belonging to the times of the earlier Caesars from Tiberius to Domitian, as follows: of Tiberius 6, Claudius 8, Agrippina 3, Elder Drusus 2, Younger Drusus 5, Nero 17, Caligula 1, Domitian 5, Nerva 2.'[51]

(30) 1856*c*. KARUR, Karur tk., Trichinopoly dt., Madras pr. [Kr*b*

'Three washermen of Karur, while searching for Fuller's earth, came upon a large *chatty* containing some hundreds, if not thousands of denarii. There were five or six Madras measures[52] of them . . . I cannot hear that a single denarius remained unmelted. My informant believes that most of them were like an Augustus I showed him.'[53]

(31) 1863*n*. COIMBATORE DT., Madras pr. [CoD*d*

Three aurei were found at or near Coimbatore.[54]

(32) 1864*n*. RAWALPINDI tn.,—tl.,—dt., Punjab pr. [Ra

'A great number of Roman and Indo-Scythian gold coins' were 'lately . . . offered for sale at Rawalpindi; many of these' were 'in such fine condition that it is quite certain they could never have been in much circulation, and, therefore, we are justified in concluding that they must have been discovered, either in topes, or in other deposits under ground.'[55]

(33) 1873*n*. CUDDAPAH,—tl.,—dt., Madras pr. [Cu

An aureus of Trajan was 'found at Kadapa.'[56]

(33a) 1874*n*. SOUTH INDIA. [SI*b*

A number of Roman coins were preserved in the Madras Museum in 1874, and most of them had probably been collected in South India.[56a]

(34) 1874*n*. BAMANGHATI (near),—dt., Mayurbhanj st. [Ba

'Some years ago a great find of gold coins containing, among others, several of the Roman emperors, Constantine, Gordian, etc., in most beautiful preservation, were found near Bamanghati.'[57]

(35) 1878. KARUR (near),—tk., Trichinopoly dt., Madras pr. [KRc

A hoard of silver Roman coins 'seems' to have been 'dug up by a famine coolie in 1878 while engaged in deepening a water course near Karur', and it appears that there were about 500 of them in an earthen pot.' It is added that 'two-thirds were melted to make bangles;' only 'about a hundred' were recovered. 'Twenty-seven of the coins belong to the reign of Augustus, and ninety to that of Tiberius. Although all the former commemorate the same event they are not all from one die.' The others were of another well known class.[58]

(36) 1879. JALALABAD. [JA

In excavating the Ahin Posh 'tope' or stupa at Jalalabad, twenty gold coins were discovered in the cell, in which 'there lay about two or three handfuls of what (may) be ashes, 18 gold coins, and a golden relic holder for wearing by a cord round the neck.' In the relic-holder were two gold coins. Three of the coins lying loose were Roman aurei.[59]

(37) 1880n. REWAH tn., Rewah st. [RE

Two Roman gold coins (and one Gupta and eight Indo-Scythic) 'were discovered' by Colonel Berkley, then Political Agent in the State, 'together with a quantity of gold mohurs . . . in a subterranean treasury at Rewah soon after the death of the late Maharajah.'

One was of Commodus and 'had a suspicious look.' Another was of Clodius: it 'bears distinct traces of its having been cast in a mould: . . . it is a forgery, a gold coin' imitated from 'a rare brass coin.'[60]

(38) 1882n. MAHABALIPURAM, Chingleput tk.,—dt., Madras pr. [MPb

'A number of coins of all ages have been found, . . . amongst others, Roman, Chinese and Persian.'[61]

(39) 1882n. MADURA tn.,—tk.,—dt., Madras pr. [MDd

'Mr. Scott, Pleader in the District Court of Madura,' had a collection which included 'a large number of Roman copper coins found in the bed of the river, as well as a Chinese coin from the same place.'[62] It comprised 'coins of Honorius and Arcadius.'[63] The copper coins had been 'found all about the bed of the river in the sand, not stored in one place.'[64]

Writing in 1904 about this collection, the same authority said that 'a large number, probably some hundreds', of Roman copper coins, were in 1881 'lying loose in a drawer' in Mr. Scott's house, 'some' of them 'being of Arcadius and Honorius . . . Almost all, of these 'had been found in Madura itself. . . The presence in many different places in the same town of Roman copper coins, found lying in the ground and in the sandy bed of the river, seems to imply that these coins were in daily circulation and were dropped carelessly or otherwise lost by the inhabitants of the place.'[65]

(40) 1882n. SOUTH INDIA. [SIa

Among the coins collected by the Rev. Dr. Kennett, who had collected them 'at various times', evidently in south India, were 'copper coins of Trajan, Antoninus Pius, Severus Alexander and Julia Augusta.'[66]

(41) 1882n. INDIA. [INb

The India Office at London had a collection of Roman coins which had been made over to it from time to time by many who had been collecting in India.[67]

(42) 1882-3. MADRAS (near), Saidapet tk., Chingleput dt., Madras pr. [SPT

'During a short visit to an old temple near Madras', copper coins were collected which belonged 'to the Pallava, Chalukya, Chola and Pandya dynasties' and also 'a specimen, much worn, but undoubtedly Roman'.[68]

(43) 1883n. MYSORE st. [MYS

'An extremely rare and interesting gold coin, an aureus of Laelianus,[69] one of the thirty tyrants, was purchased[70] from a native gentleman in Mysore. . . So far as I ascertain no other copy of this aureus is known.'[71]

(44) 1884n. MAHABALIPURAM, Chingleput tk.,—dt., Madras pr. [MPc

'A solitary (Roman) coin was picked up some time ago near the Seven Pagodas. . . It was thought to be of the reign of Theodosius, but was a good deal the worse for wear.'[72]

(45) 1885. MANIKYALA, Rawalpindi tk.,—dt., Panjab pr. [MKb

An armlet of gold, 'consisting of five gold coins set at small intervals in a row between two pieces of stout gold wire, of the length of about 5¼ inches' and of the breadth of 'nearly one inch,' with the interstices 'filled in with very thin plates of gold, showing traces of having been once mounted with gems or enamel', and 'finished off at both ends with a narrow band of gold, to which at one end a small tube of gold is attached', was 'found by a peasant of the Top Manikyala village. . . while ploughing his field.' The jewel was set with five aurei. 'On the whole they are in very good preservation'.[73]

(46) 1886*n*. SOUTH INDIA. [SI*b*

Among the coins that 'came to light' when the collection of the Madras Government Museum was rearranged in 1886 were 'an issue of Plautilla, wife of Caracalla' and 'a fine green, copper coin of Constantinus Magnus struck in London'.[74]

(47) 1887. VIDIYADURRAPURAM,[75] Bezwada tk., Kistna dt., Madras pr. [Vi.

The remains of a chaitya covered over by a mound, to the south of the village, were excavated. 'Below the stone flags of the floor, near the door, a Roman silver coin was found. It had evidently slipped down between the joints.' It was in good preservation: 'but the whole coin is coated with a resinous substance which will have to be carefully removed before the inscriptions can be read'.[76]

The coins were probably two, not one.[77]

(48) 1887. KILAKKARAI, Ramnad dt., Madras pr. [KI*a*

'While walking along the beach north-east of Kilakarai to visit the Naajimundel beacons', the Port Officer of Pamban 'noticed the beach strewn with quantities of pottery of various kinds. On making enquiries he was told that the legend runs that, in the time of the Pandyans, there was a large city extending from Kilakarai to Muthupettah, which is about nine miles, and that it also extended to Sheramoodelly Theevoo, an island about five miles south; that a hurricane submerged the whole country, and the islands were then formed from part of the mainland. On enquiry whether any coins were ever found (he) was told that they were sometimes, and eventually a parcel of coins was sent to him.'

The collection contained many 'common coins' and also 'Buddhist, Vijayanagar, Chola, Pandyan, Setupati, and Indo-French coins, and a coin of the Ceylonese monarch Sahasa-Malla', copper coins of Parakrama-Bahu and a copper coin of Ahsan Shah.

It included also 'two Roman copper coins both very much worn and having the legends on the obverses entirey illegible. One bears on the obverse the head of some Emperor, and on the reverse a cross within a circle, while the other bears on the obverse the head of an Emperor (Decentius or Julianus II ?) and on the reverse the legend VOT. XV MVLT XX in four lines within a laurel wreath, fastened above with a circular ornament'.[78]

(46-a) 1886. INDIA. [INc

'A thin, bracteate-like gold piece with barbarous legend imitating the solidus (*obv.* full-face head of Justinian). This was acquired by the British Museum in 1886 from Lieut.-General G. G. Pearse, a well known collector of Indian coins. There can be little doubt that it was made in antiquity in India, probably in *southern* India, where imitations of ancient coins are generally found . . . '.[79]

(46-b) 1889. KABUL VALLEY, Afghanistan [KvV

'Roman gold coins are still discovered in the Buddhist monuments of the Kabul valley, from the time of Augustus down to the fifth century. I have had gold coins of Leo, Justin, and Anastasius sent to me several times, and twice I have obtained coins of Focas'.[80]

(49) 1889*n*. HIDDA, Jalalabad dt., Afghanistan [HI

One of the *stupas*[81] . . . contained a deposit of coins consisting of five gold *solidi* of the Byzantine emperors, Theodosius, Marcian and Leo, two very debased imitations of the Indo-Scythian coinage, which may be assigned to the sixth century, and no less than 202 Sassanian coins of various reigns'.[82]

(50) 1889*n*. UPPER INDIA. [UI*c*

A Roman coin of which no further particulars are available was collected here.[83]

(51) 1889 *n*. VINUKONDA, —tk., Guntur dt., Madras pr. [VK

'Treasure, consisting of fifteen gold coins of the Roman Empire' was 'found . . . while . . . digging in the old fort of Vinukonda . . . Though many of the coins are bent, and some are perforated, as if they had been worn as ornaments, all are in a good state of preservation, and the legend on the obverse of No. 6 alone is illegible'.[84]

(52) 1889*n* MADURA DT., Madras pr. [MDD*a*

A 'specimen' in gold,[85] found here 'closely resembles on the reverse an issue in the British Museum of Leo III'.[86]

(53) 1889*n*. MADURA DT., Madras pr. [MDD*b*

'Large hoards of aurei' are 'from time to time unearthed' in south India . . . 'The perfect state of preservation . . . in which these coins have almost invariably been found precludes the possibility of their ever having been much in circulation. Most, indeed, are so perfect that from their appearance they seem to have come direct from the Moneta on the

Capitoline Hill to the shores of India. . . . Such, however, cannot be said with equal certainty of the stamp of coin to which I now allude, and of the existence of which no record has, as far as I am aware, ever yet been made. These little copper pieces are found in and around Mádura, and some years' hunting has proved to me beyond a doubt that they were at one period in pretty general use in that part. Hitherto they appear to have completely escaped the notice of collectors. . . .

'In the first place, during a recent visit to Madura and the surrounding villages in quest of specimens, I came across no less than seven of these coins, Roman beyond any doubt, but of a type which appears to me to be totally distinct from that found in Europe. These specimens were scattered over several parcels that I examined, and were not all together in one or two, as is usually the case when a number of issues have been dug up together. Nor was this by any means a solitary instance, for I have rarely paid a coin hunting visit to these parts without meeting with more or less specimens, and other collectors tell me that their experience has been the same. Moreover, they are not the kind of money that one would expect the rich Roman merchant to bring in payment for the luxuries of the East, but small insignificant copper coins, scarce the size of a quarter of a farthing and closely resembling the early issues of the native mints. Then, again, though . . . large hordes of aurei have from time to time been discovered and solitary specimens of course ever and anon occur, I have never yet heard of the discovery in Southern India of any of those fine copper coins (known as 1st and 2nd brass) so plentifully found among the Roman remains exhumed in various parts of Europe, and of all the specimens I have myself met with not one has borne the faintest resemblance to them. Nor is this all. While aurei have been discovered in various parts, and on one occasion a large number of denarii of Tiberius and Augustus together, the stamp of coin I now refer to occurs, as far as I can learn, in and around Madura *alone*. . . .

'On the obverse of all that I have met with appears an emperor 's head, but so worn that with one or two exceptions the features are well nigh obliterated. In one or two specimens a faint trace of an inscription appears running round the obverse, but hitherto I have not come across a single specimen in which more than one or two letters are distinguishable. The reverses vary considerably, but the commonest type seems to bear the figures of three Roman soldiers standing and holding spears in their hands. Another bears a rectangular figure somewhat resembling a complete form of the design on the reverse of the Buddhist square coins found in the same locality, while most are too worn to allow of even a suggestion as to what their original design was intended to represent. On one specimen the few decipherable letters appear to form part of the name Theodosius, and the style of coin points to the probability of its having been issued during the decline of the Roman Empire, possibly after the capital had been transferred to Constantinople'.[87]

(53-a) 1889. Madura tn, Madura tl., Madura dt. [M*Db*

(54) 1890*n*. Nagdhara, Jalalpur tk., Surat dt., Bombay pr. [Nd

An aureus ' in very fine preservation ' was found in a field.[88]

(55) 1890*n*. Bombay tn., Bombay pr. [Bo

Among the coins 'collected here [89] were a brass coin of Gallienus . . . of impure silver, and probably a forgery, as it has a blundered legend '. The coin 'was obtained at Bombay '.[90]

(56) 1890. Waghode, Raver tk., East Khandesh dt., Bombay pr. [Wa

An aureus 'in very fine condition' was found 'by a peasant when ploughing'.[91]

(57) 1890. Bangalore ct., Mysore st. [Bl

' Several specimens ' of the denarius of Tiberius (similar to Corp. 119–157), ' turned up ' in 1890 'in the Bangalore Cantonment bazaar '.[92]

(58) 1890. Kilakkarai, Ramnad dt., Madras pr. (K*ib*

Among 'the remains on the beach' were picked up 'a number of copper coins, among which was a Roman one . . . The best time for finding these is in the month of July, after the setting in of the south-west monsoon has washed away some of the sand from the beach.' [93]

(59) 1891*n*. Vellalur, Coimbatore tk., Madras pr. [V*eb*

' A find of silver Roman coins (*denarii*) was made in the village . . . when taking out earth for a wall from some waste land.' [94]

(60) 1891. Yasvantpur, Bangalore tk., dt., Mysore st. [Ya

While excavating the 'cuttings for store sidings of the new railway to Hindupur, between the Southern Maharatta Railway and the village of Yashvantpur,[95] . . . 'an earthen pot' was 'found about 1½ feet below ground, and was broken by a labourer's pickaxe'. The pot contained 161 denarii, 'representing 10 types'. Some were 'a good deal abraded' but 'generally' they were 'in good preservation, with the faces on them sharp and clear'.[96]

(61) 1894*n* MADURA DT., Madras pr. [MDD*c*

'Copper coins of Theodosius, Honorius (?) and Anastasius, and several other copper Roman coins with indistinct legends' had been collected 'from Madura'.[97]

(62) 1894*n*. TIRUMANGALAM tk., Madura dt., Madras pr. [TITb

An 'aureus' of Theodosius and another of Constans II (?) had been 'found' in the taluk.[98]

(63) 1894*n*. MADURA DT, Madras pr. [MDD*d*

An aureus of Domitian had been collected in the district.[99]

(64) 1897*n*. KOTTAYAM tk., Malabar dt., Madras pr. [Ko*b*

'An aureus of Theodosius was picked up by ryots ploughing a field in a hilly place to the south-east of the village.[1]

(65) 1898. KARUKKAKKURICCHI, Alangudi tk., Pudukkottah st.[2] (KK

A 'hoard' of Roman aurei 'was discovered early in 1898' at Karukkakkuricchi:[3] the hoard was secured very nearly if not altogether intact[4] . . . They are unfortunately without exception in bad condition, having evidently been in circulation a long time before they were buried . . . more than 90 per cent of them[5] have been deliberately defaced with a file or chisel.[6]

(66) 1899*n* PAKLI, Hazara dt., North-West Frontier pr. [PA

'Last autumn . . . there was a find of denarii in Pakli. The coins got into the hands of the Pindi dealers. Up to the present we do not know how many were obtained.' The 'types' which were 'secured' were 23 in number.[6]

(67) 1899*n* SALIBUNDAM, Chicacole tk., Vizagapatam dt., Madras pr. [SA

'Eleven silver denarii of Tiberius' were 'found in a hill' at the village.'

(68) 1900*n*. KRISHNA DT., Madras pr. (KsD

'A forgery of a gold Roman aureus' was found in the district. 'Concerning this coin, Mr. Rapson, of the British Museum, writes as follows: "It is interesting in many respects. It is a copy of an aureus of Faustina, the elder, wife of Antoninus Pius (A.D. 138–161), undoubtedly, so far as the obverse goes. With regard to the reverse type—the three standing figures—it is something like that of a coin of Faustina I, with the inscription VOTA PVBLICA, which has three standing figures; but two of these are females, and one only is male. Moreover, your coin has on the reverse a mint-mark (perhaps a corruption of CONOB), which belongs to a period later than that of Faustina I. All one can say is that the coin is undoubtedly an Indian imitation of a Roman aureus of Faustina I, influenced probably by other Roman coins of a later date. Whether the imitation is ancient or modern, is a question not so easy to answer. There seems no reason why it should not be ancient, except, perhaps, that the colour of the gold is somewhat lighter than is usually the case with ancient Indian gold." '[8]

(69) 1902. SOUTH INDIA. [SI*c*

'An aureus of Augustus, 'found in S. India . . . was acquired by purchase' for this Museum.[9]

(70) 1904*n*. KARUR, Karur tk., Trichinopoly dt., Madras pr. [KR*d*

'An aureus of Marcus Aurelius Antoninus'[10] was 'found at Karuvur'.[11]

(71) 1904*n*. PUTHENKAVU, Chengannur tk., Quilon dn., Travancore st. [PU

'A find of about fifty' gold 'Roman coins (solidi)' was made 'by arayat, in a pot three feet below the surface.' Six of these were acquired for this Museum.[12]

(72) 1905*n*. ONGOLE tk., Guntur dt., Madras pr. [ONT

'Two Roman gold solidi, of Nero and Hadrian', were recovered out of a find of a larger number 'on the bank of the Paleru river'.[13]

(73) 1909*n*. CHANDRAVALLI, Chitaldrug tk.,—dt., Mysore st. [CV

A denarius of Augustus, with 'two small coins, one lead and the other probably potin', bearing 'neither legends nor symbols visible on them' was discovered as treasure trove.[14]

(74) 1910*n*. KALLAKINAR, Palladam tk., Coimbatore dt., Madras pr. [KL

'Two silver coins (denarii)' in 'a poor state of preservation' were 'said to have been found with some other silver and gold coins and jewels, in an earthenware pot, obtained in the course of digging and levelling the raised portions of a field in the village'. The other coins and the jewels were not discovered.[15]

(75) 1912*n*. COIMBATORE DT., Madras pr. [CoD*e*

Two denarii 'of Tiberius' which 'belong to a common type' were discovered in the district.[16]

(76) 1913*n*. KATTANGANNI, Dharapuram tk., Coimbatore dt., Madras pr. [Kc

'Two hundred and thirty-three Roman silver coins (denarii)' were found in the district, 'all belonging to two common types of which several large finds have previously been made in southern India[17] 184 of the coins were struck during the reign of Emperor Tiberius (14-37 A.D.) and the remainder in the reign of Augustus (29 B.C.-14 A.D.)'[18]

(77) 1915*n*. KOTPAD, Jeypore tk., Vizagapatam dt., Madras pr. [Kt

'Four Roman silver coins (denarii), three being of the emperor Augustus (63 B.C.-14 A.D.) and one of the emperor Tiberius (42 B.C.-37 A.D.)' were found in the village 'during the digging of foundations for the quarters of the Sub-Inspector of Police.'[19]

(78) 1915*n*. MALLAYAPALEM, Guntur dt., Madras pr. [Ml

'Four Roman gold coins (aurei)' were 'found by persons sifting earth taken from a field at the village . . . These aurei are in a fine state of preservation'.[20]

(79) 1916*n*. KALIKANAYAKANPALAIYAM, Coimbatore tk.—dt., Madras pr. [Ka

'A Roman gold coin', which is 'a solidus of the Emperor Justinianus', was found in the village.[21]

(80) 1917*n*. MADURA TN., tk.—dt., Madras pr. (Md*c*

'A find of eleven Roman gold coins' was 'discovered by Mr. J. Craig Harvey in the course of excavations in the compound of the Madura Mills at the town of Madura . . . Seven of the coins have been defaced by a slight cut across the emperor's head, but they are otherwise in fine condition.' The aurei were of 'nine varieties'.[22]

(81) 1918*n*. UPPARIPETA, Godavari dt., Madras pr. [Up

'Three gold coins' were found in the village, 'which appear to be early Indian imitations of Roman aurei, made for use in jewellery . . . . Two of them are bored'[23]

(82) 1918*n*. TONDAMANATHAM, Cuddalore tk., South Arcot dt., Madras pr. [To

A 'find of six Roman gold coins' was 'discovered during excavations at' the village. 'They comprise three aurei of Tiberius (14-37 A.D.), one of Claudius and Agrippina (41-54 A.D.), one of Nero (54-68 A.D) and an undetermined coin. All are unfortunately defaced by a cut across the emperor's head. An interesting feature of the find is that it also comprised 27 silver puranas . . . .'[24]

(83) 1918*n*. MALAYADIPUDUR, Nanguneri tk., Tinnevelly dt., Madras pr. [Ma

'Four gold solidi' of the later Roman empire' were found in the village. 'Two of them are referable to the emperors Theodosius II (408-450 A.D.) and Anastasius I (491-518 A.D.), while the other two which have grossly blundered' inscriptions are possibly copies made for use in jewellery, for which purpose all coins have been bored.'[25]

(84) 1928*n*. GUMADA, Jeypore tk., Vizagapatam dt., Madras pr. [Gu

Twenty-three Roman gold coins, 'unidentified,' were discovered.[26]

(85) 1929. MAMBALAM, Madras, Madras pr. [Mb

'A single coin of the Roman emperor Augustus' was included 'in the large hoard of 770 punch-marked coins found at Mambalam.'[27]

(86) 1931. KARIVALAMVANDANALLUR, Sankarankoyil tk., Tinnevelly dt., Madras pr. [Kv

In a field in the village (Survey No. 124-2), two boys came across six aurei, two rings, a chain, a jewel and beads (Fig.) which had been probably exposed by a heavy down-pour of rain a few days earlier.[28]

(87) 1932*n*. VELLALUR, Coimbatore tk.—dt., Madras pr. [Vec

A batch of 121 denarii of Augustus, together with 23 'unstruck pieces' of silver were found in a plot of poramboke land.'[29]

(88) 1933 *ante*. SOUTH INDIA. [SI

In 1933 it was found that a few coins were in the cabinet of this Museum the precise find-places of which could not be determined. The available records do not show either that Roman coins found outside of India had been acquired or that any specimens found north India had been received. It has therefore been assumed that that all these coins were found in south India itself.

(89) 1933*n*. GAIPARTI, Suryapet tk., Nalgonda dt., Nizam's Dominions. [GA

Three Roman gold coins were found.[30]

(90) 1933. NANDYAL tn., Nandyal tk., Kurnool dt., Madras pr. [NA

'When two coolies (workmen) were engaged on 30th June 1933 in widening a saw pit close to a house in course of erection on S. No. 589, the crow-bar of one of the coolies struck against an earthen pot at a depth of three feet from the ground level and broke it, and a batch of gold coins was found to have been preserved in the vessel. The two coolies divided the coins among a number of others as well who came to know of the find, but information reaching the Revenue Inspector of Nandyal on 7th July 1933, an attempt was made to trace the coins, but only 52 were recovered.'[31]

(91) 1935*n*. KULATTUPPALAIYAM, Dharapuram tk., Coimbatore dt., Madras pr. [KU

Three bits out of a number of pieces into which an aureus of Theodosius had been cut up were found, along with a number of pieces of a gold chain and of flat pieces of gold, in a metal receptacle, which lay buried in Survey No. 697, itteri poramboke.'[32]

(92) 1934-5. TAXILA, Rawalpindi tl.,—dt., Panjab pr. [TX

A denarius of Augustus was found, along with a coin of the dioskourn type of Azilises, and a tiny gold relic casket, in a steatite casket dug up from Stupa IV discovered near the Dharmarajika Stupa.[33]

(93) 1936. TANJORE tn., Tanjore tk.,—dt., Madras pr. [TA

A sestertius of Diocletian—a piece of 'brass' with traces of silver-wash,—was purchased from a dealer in copper scrap, having been picked out of a large mass of copper coins which must have turned up as treasure trove in the neighbourhood.[34]

(93a) 1936*n*. SOUTH INDIA. [SI*e*

A 'barbarous' issue of Severus was 'found in S. India.'[34]

(94) . . . MUTTRA, TN., Muttra tl.,—dt., United Provinces. [MU

'An illiterate person got' an aureus of Caracalla 'as a stray find from a mound in the suburbs of the city.'[35]

(95) 1938*n*. GHANTHASALA, Divi tk., Kistna dt., Madras pr. [GH

A set of two prints of photographs of a batch of . . . coins was placed in the heads of the present writer in 1938 by a friend who told him that the photographs had been taken by a native of Ghanthasala some ten years earlier, the coins having been picked up from time to time as stray finds at different places in the village between the years 1918 and 1928.[36]

CHARACTERISTICS OF THE FINDS.

NOTICES.

The notices we have of the finds are often of little value, failing as they do to advert to important particulars. One of the finds, believed to be of denarii, did not come under the eye of any one interested in numismatics.[1] Of the coins of another find it is said that they were 'supposed to be Roman'; it is not known on what ground the supposition rested.[2] Finds are naturally treated as loot, and they get divided among so many people[3] that often it becomes difficult to determine, even roughly, what the composition of the find was. Only occasionally does more than one fraction reach the hands of the numismatist.[4] The accounts of three finds are discrepant on material facts.[5] In a few cases, nothing has been recorded about the coins except that they were Roman.[6] Sometimes, the find-places have not been noted at all; often, nothing more than the neighbourhood in which the find was made is recorded;[8] the district or the sub-district is mentioned occasionally.[9] Even where the provenance has been noticed, it is not clear whether the coins were found as treasure trove.[10] In a few cases the references are silent as to whether the coins were of gold or of silver or of 'brass.'[11] In yet others, no indications are given as to the date to which the coins belonged, not even the name of the emperor being alluded to.[12]

Distribution.

The areas over which the coins were acceptable are easily determinable from the distribution of the find-places.[14] In the Jalalabad district of Afghanistan there occurred two finds, and they have been treated here as having been discovered in India, not merely because the find-places are quite near the present Indian border and the finds are the only ones known to have been made in Afghanistan, but also because the find-spots lay, in the days to which the coins belong, in territory that was Indian for all essential purposes. A find has been reported in the North-West Frontier Province, but it is a solitary find. From the region of Rawalpindi come all the coins that have been found in the Punjab. Half a dozen places in the United Provinces have yielded these coins. Almost as many find-spots lie within the confines of the Bombay province. It is, however, in the Madras province and in the territories which it surrounds that we have had the heaviest and the most numerous yields : the find-spots and the finds out-number greatly those in all other parts of the country. The finds in Ceylon are extremely interesting, but the scope of this inquiry would be greatly widened if they were taken up for study.

Over large areas, however, the coins have not been found. Not one find has been made in the vast region that lies within a line drawn roughly from Peshawar to Rewah (some seventy miles almost south of Allahabad), and thence along the Vindhyan range to the Arabian Sea, and then coastwise to Karachi, and beyond. Nor have we known of any find in the extensive region east of Allahabad watered by the Ganges and the Brahmaputra. In the large stretch of land included in the areas known as Central India, the Central Provinces and Orissa, we have had only two finds. In all the Dekhan, which comprises a large tract of country including the Nizam's Dominions, we have had no more than one find.

Perhaps a clearer idea of the range of the reach of the coins would be obtained if we observed how they have been found distributed in the north-west, the north, the north-east, the middle and the south of the country. An attempt could then be made to relate the finds to the political and the economic changes that the country has gone through.

A division of the country into such geographical regions cannot but be very rough in character. The accompanying sketch-map is an attempt at a division of the country into regions which would be easily recognisable and would at the same time correspond in some measure to the limits of important factors like race and language, and even modern provincial boundaries.[14] It will be found to be helpful in various other studies as well,—such as the ethnographical, the linguistic and the archaeological.[15]

Region A includes Kashmir, the North-West Frontier Province and the Punjab. For the reasons already set out, the contiguous areas on the other side of the present western border may be deemed to fall within this region. Rajputana, Sindh and Gujarat fall in region B. The basins of the Ganges and its tributaries and the areas to the south down to the Dekhan are covered by region C. In region D are included the provinces of Bihar, Bengal and Assam. Region E comprises the Dekhan in the middle, the lands to the west of the Western Ghats and the lands to the east of the Eastern Ghats : to put it differently, the Maharatta, the Telugu and the Oriya countries form its components. In region F we have the southernmost part of the country,—south of the Dekhan, and comprising a small portion of the Telugu land, practically the whole of the Kanarese country, and the Tamil and the Malayalam countries in their entirety. For a number of reasons, region G, Ceylon, has occupied a unique position in India and must therefore be treated as a separate entity.

Three find-spots fall within region A, and seven in region C ; as many as 14 lie in region E ; but, the largest number, 30, is claimed by region F. Not one find-place, however, is located in region B, and the only find-spot in region D would have been out of the region had it been situated just a few miles to the south.

The absence of discoveries of the coins in such areas cannot be explained on the hypothesis that the coins reached only the margins of the country,—along the line of its north-western frontier, which is the tract nearest by land to Rome and her dominions, and along the coasts, both western and western, which were perhaps more easily accessible as the sea-route was probably easier than the routes by land.

Regions.

It is true that Roman coins have been found near the land-frontier[16] and the sea-coasts;[17] but a much larger number have been found in areas removed a fair distance from frontiers and coasts;[18] indeed, many have turned up at places so far in land as Allahabad,[19] Rewah,[20] Gaiparti,[21] Cuddapah,[22] Nandyal,[23] Chandravalli[24] and Coimbatore.[25]

Our present knowledge of the geographical distribution of the find-places seems therefore to suggest that the penetration of the country by the coins has, in some measure, been eccentric.

The finds have been most numerous in the Madras province; they have occurred in eighteen out of its twenty-six administrative divisions. They have turned up also in the three principal territories adjoining the province:[26] the find in one of them is very important.[27] Owing to the law governing treasure trove, they have reached,—though often partially,—institutions such as this Museum, where they have been preserved or studied with some care.

Medals.

A find that came to light about 1788 is said to have comprised not only Roman coins but also medals,[28] but it is doubtful,—in view of no further particulars having been given of them, of the dubious purport of the term 'medal' in those days and of no other find being known to have yielded any,—whether medals in the strict sense were among the objects discovered. One of the finds was in a pot belonging to a burial of a prehistoric character;[29] four finds came from stupas;[30] and one from a chaitya,[31] an important hoard occurred in the ruins of a Hindu temple.[32] The coins recovered from stupas were naturally found associated with objects common in stupa-deposits. But a hoard in the southernmost district of the country, not much north of Cape Comorin, which did not come from a stupa, comprised not merely coins but also 'two rings, a chain, a jewel and beads.'[33]

A Jewel.

The jewel is fashioned in a manner not common now in this country. Two sheets of gold, beaten thin and cut to a circular shape, have been impressed in repousse with designs: on one of the two sheets a legend too has been impressed, also in repousse. The two sheets have been placed back to back and bound together by two narrow strips of gold which are run along the upper and lower margins of the sheets and soldered together. A tiny hole occurs in the edge: it was probably intended to allow of molten lac being poured between the sheets to fill in the interspace and prevent the repousse work being obliterated through rough usage. A series of tiny rings in gold have been soldered to the edge for a thin wire to be passed through them all. If the beads of gold found along with the jewel are grouped in the interstices between the rings and threaded through, they would make the jewel almost indistinguishable from the type of pendents to necklets in common use in the country. The beads and the 'chain' of gold were all, obviously, used along with the circular piece, and together they constituted a necklet with a pendent. The jewel has, however, been subjected to hard usage; it has lost most of the beads that clustered thick and close along the edge; the devices are battered, and the sheets have in places got creased and crinkled, and even broken.

The design on the obverse stands out in very high relief and represents a boldly modelled bust of a figure wearing a veil over the head. The features seem to be those of a matron, Roman or Greek, and the veil is worn in the manner affected by the fashionable ladies who are represented on Greek and Roman coins till about the beginning of the 3rd century A.D. The devices on the reverse are in very low relief, and the crinkling of the sheet makes it difficult to identify the devices. They may, however, be a high and narrow flagon on the left, and a long cornucopia on the right; both are objects frequently found represented on Roman coins.

Along the margin of the reverse are found curves and strokes in repousse running in the manner of a legend. They are so faint that they escape notice unless the jewel is attentively examined and in more than one light. The more closely one examines these lines the surer does one grow that they do constitute a circular line of writing : they shape themselves into a legend. The injuries which the reverse sheet has sustained have dented and crinkled it so badly, especially along the margin, that serious doubts arise about some lines and loops ; at places it looks as if a line fashioned in repousse has been smashed by an injury : at other places it looks as if such a line were a mere crinkle due to another injury : in the result, it is difficult to decide which lines are to be taken as forming part of the writing and which are not to be.

The sketch in the margin represents an attempt to give an idea of the types on the obverse and the reverse, and to reproduce the legend faithfully. In drawing the sketch, the legend has been viewed from all possible points of view, especially as what looks a stroke of writing from one angle looks a crinkle from another, and an endeavour has been made, with the aid of symbols, to indicate the condition of the legend. As it is hard to find out where the legend begins, and as the legend, being circular, may be read clock-wise or counter-clockwise, it has been sketched in a straight line, starting from the letter which stands at 11 on a clock-face,—treating the face of the jewel as that of a clock,—and proceeding clock-wise. The sketch has only to be held upside down to get a reading of the legend in the counter-clock-wise mode.

At first sight the legend appears to be in Brahmi,—a syllabic system of writing used in India from at least about the 4th century B.C. to the 3rd century A.D. There is no denying that a few of the letters could be identified with characters in that graphic system, but there are other letters that seem to be foreign to it. The legend has therefore to be abandoned as being indecipherable at present.[34]

'Brass' Issues.

The occurrence of the 'brass' issues of Rome in India has been doubted. An important collection of 'brass' which was taken by one authority to have been composed of pieces found in India,[35]— a supposition which at least in part was confirmed by those who had actually 'procured' or 'collected' one or other of them in India,[36]— has been ignored by another authority on the ground that 'further details' than that they were 'of Indian origin' could not be given of them, 'so that the statement cannot well be accepted as basis for argument.' It has been contended that 'there is nothing to show that these were found anywhere in the soil of India' and it has been concluded that 'the only safe course is to leave them out of account altogether.'[37] Further, we are told of certain types of brass having been turned out in large quantities in this country itself ; [37]—a little has been said of them except that they appear to be local imitations of Roman issues,[38] and no endeavour has been made to establish their character more precisely or to determine their date. The 'brass' coins therefore, are a problem calling for special consideration. That most of the 'brass' coins did actually reach India within a century or two of their issue cannot be doubted merely on the score that the records of the finds of them are wanting in precision. A brass coin of Carinus is very definitely stated to have been 'dug up in the neighbourhood' of Mirzapur.[39] We have the testimony of a traveller, who wrote slightly earlier than 1798, that ancient Roman copper coins were sometimes met with at Surat.[40] A batch of twelve copper coins is said to have been 'found buried in upper India.'[41] A sestertius of Diocletian was picked out [43] of a mass of copper coins which had reached a merchant in scrap-metal at Tanjore,[43] the mass being obviously composed of portions of various finds of copper coins in those parts of south India which are now sending scrap-metal to that city. It cannot be treated as a stray coin incapable of pointing to the area in which it must have reposed for ages till it was shovelled out from the earth and despatched to Tanjore as scrap-metal : the coin must have lain buried at some spot not more than two or three hundred miles away from that city. When

a Roman copper coin is 'collected' in the vicinity of Madras,[44] or when 'little copper pieces' are 'found in and around Madura' or when some of these coins are come across 'during a. . . visit to Madura and the surrounding villages in quest of specimens,'[45] there can be no cavilling at the suggestion that they had reached India centuries ago, merely because of the absence of specific statements as to the precise spots where they had been lying at rest. An obolus of Theodosius I is found at Mahabalipuram[46] a 'solitary (Roman) coin is picked up. . . near the Seven Pagodas' (Mahabalipuram)[47]; an 'ancient' Roman gold coin is discovered in a ridge of sea-sand along the beach at Alamparai;[48] some coins are picked up along the beach at Kilakkarai,[49] coins of Valentinian, Theodosius and Eudocia are found along the Coromandel Coast, 'after every high wind, not in one or two places, but at frequent intervals.'[50] Roman coins are 'found all about the bed of the river' Vaigai in its course through Madura, and are found also 'in many different places in the same town.'[51] On what grounds are we to deny that these reached this country within some decades of their issue? The evidence for the influx of 'b[illegible]s' is so cogent as to be incapable of being doubted.

MUTILATION.

A few of the finds of gold coins contain pieces that are badly bent: both the Vinukonda[52] and the Nandyal[53] finds contain such specimens and it is probable that the Kaliyamputtur[54] find too contained a few such pieces. That the bending was deliberate admits of no doubt, considering that the process involves special effort, but it is not easy to say why the attempt was at all made. The scarcity of finds containing such coins and the apparent absence of all motive for the bending raise a doubt whether all such coins found in the three places did not originally belong to one batch, but no conclusion seems to be possible, for the relevant data have not been recorded in the accounts we have of the finds at Kaliyamputtur and Vinukonda.

A good proportion of the aurei in a few of the finds is deliberately defaced,—the coins being marked with a clean chisel-cut severing the head on the obverse in two. A silver piece in the collection of this Museum has been similarly disfigured,[55] but this is the only denarius so treated of which we have knowledge. It may be that only gold pieces were liable to be subjected to such treatment, and that the solitary denarius suffered defacement through some odd mischance.

A head or a bust is the type that has given offence; none of the other numerous types common on Roman issues has provoked wrath,—not even the human figure figured at full length. Occasionally, where a coin bears a bust or head on the obverse and also one on the reverse, both are cut at.[56] The inference seems to be justifiable that the defacement was effected in areas where it was well understood that the heads and busts on Roman coins are generally representations of the emperors and their relations and that the human figures shown full length are mostly personifications.

The defaced coins are found only in the hoards that have turned up in middle and southern India,[57] but no useful conclusion may be drawn from this phenomenon, the finds in gold in upper India being all too few.

The dates when the defacements should have been effected may roughly be determined for each hoard by the date of the latest coin in it to be found defaced, if we assume for the moment that all the defaced coins in a hoard were defaced at one time. Considering, then, that the latest of such pieces in the Tondamanatham hoard belongs to 51–54 A.D.,[58] that the latest of those coins in the Madura hoard is of 61–62 A.D.,[59] that the defacement in the Nandyal hoard stops with a coin of 63-64 A.D.,[60] and that the latest defaced coin in the Karukkakurichi hoard is assignable to 75–79 A.D.[61], one would have believed that defacement was a device that obtained in the third quarter of the 1st century A.D., were it not that the Karivalamvandanallur batch closes with a coin of 118 A.D. that bears a cut,[62] and that the curious assortment of coins found in the batch that comes from Gumada contains a number of coins, defaced badly, which range approximately from 175 to 330 A.D.[63] The defacement of Roman coins seems therefore to have been practised as early probably as 54 A.D. and to have been persistent till at least 330 A.D.

The defaced pieces are generally found in the company of pieces which have not suffered a similar fate. For instance the Madura find of eleven aurei contains four which are free from chisel-cuts[64] and of the great Karukkakurichi hoard of over 500 aurei,[65] ten per cent have escaped the chisel. The person who of malice prepense started defacing heads on the coins of the Karukkakurichi hoard and persisted through a batch of over 400 was scarcely likely to have left his task incomplete : so too, the person who defaced the seven coins of the Madura find was by no means likely to have felt too tired to deface the other four of the find. Had all the coins found in these hoards when exhumed been included in the batches which had passed through the hands that wielded the chisels, none of the coins would have escaped the wrath. The defaced pieces in a hoard have apparently had a history different from that of the undefaced ones, and they would seem to have joined the undefaced batch after the unkindly fate had overtaken them.

		Finds.	Defaced Batch.		Undefaced Batch.	
			Number of coins.	Range in time.	Number of coins.	Range in time.
65	Kk	Karukkakurichi ..	..	B.C. 27 to A.D. 75–79	..	B.C. 19–15 to A.D. 63–64
80	Md*b*	Madura	..	A.D. 41–42 to A.D. 61–62	..	A.D. 50–51 to A.D. 81–84
82	To	Tondamanathan.	..	B.C. 31–29 to A.D 51–54	1	A.D 16–21
84	Gu	Gumada ..	8	A.D. 175–6 to A.D. C. 330	12	A.D. 195–7 to A D. 206
86	Kv	Karivalamvanda-nallur.	1	A.D. 118	..	A.D. 64–68 to A.D 95–96
90	Na	Nandyal ..	..	B.C. 8 to A.D. 63–64	..	A.D. 16–21 to A.D 145–167

But as three of the hoards contain defaced aurei later in time than the latest of the undefaced ones, we have to infer further that none of the hoards had come together by a batch of defaced aurei meeting and merging with a batch of undefaced aurei : the coins defaced and undefaced, would seem to have come together and mingled, and split and separated,—perhaps more than once.

Where defacement was effected.

It has been suggested that 'the defacement was not effected in Rome', as in that case 'it would not have been done' haphazardly, as on some of the pieces from Karukkakurichi, and 'similarly defaced coins would probably have been found in other hoards, if the coins meant for India were thus defaced before being exported', and yet 'of such defaced coins there is no record'. It has been held that 'it follows, then, that the incisions were made in India, in order to put the coins out of circulation'. For this conclusion to be accepted it has to be shown that those who mutilated the coins were aware that the busts and the heads represented the rulers and potentates of Rome and so defaced them, and knew also that the full-length human figures were representations of mere personifications and so spared them. But southern India, where the mutilated specimens are found, is removed too far from Rome, and is too distant from the long-reaching hands of Roman emperors for strong antipathy to them to have been roused and for that antipathy to have been expressed by the defacement of their images. No motive for defacement could be made out if the defacement is assumed to have been effected in India.

One of the explanations offered for the defacement is that 'the incisions were made in order to test the genuineness of the coins', but it has been refuted on the ground that 'without exception, it is the head that is defaced,' though, had such a test been the object, 'a stab in any other part of the coin would have served the purpose.'[68] Another explanation is that coins worn out by prolonged circulation were put out of circulation by being chisel-cut[69], but the mutilation has been found on coins not much subject to wear[70]. A third is that 'the defaced coins had simply passed at some time through the hands of a fanatical Muhammadan, holding the views of Mahmud of Ghazni, who declared he wished to be known as the "breaker" of idols, not as the "seller" of them', and that 'such a man finding a gold coin with a *head* or *image* on it would, before selling it, deface it by a chisel cut, and so evade the reproach of selling "idols".'[71] This explanation has been objected to on the grounds that 'the cuts are confined to the heads', while 'the figures, seated or standing', which 'bear much greater resemblance to idols than the heads alone', have, 'without exception, escaped,' and that one of two heads appearing on the same side of the same coin being defaced while the

other is not,[72] the urge to iconoclasm is not likely to have been responsible for the vandalism.[73] Considering that the latest coin in the Karukkakurichi find is assignable to 75–79 A.D., we have to conclude that the hoard was concealed not very much later. But to however late a date we may take the burial of the hoard we cannot bring it sufficiently near to 622 A.D., when the evangel against idolatry may be deemed to have assumed point and direction. Further, the latest Roman coin found in India and bearing a cut is one of Constantine the Great, of about the year 330 A.D., occurring in a hoard which could not have been in circulation for more than a decade thereafter[74]: it is not till almost three centuries later that Muhammad could be said to have preached the duty of iconoclasm. Moreover, none of the numerous Roman coins of silver found in India, except an all too unique piece,[75] has been defaced: their escape would be inexplicable if we accepted the iconoclasm theory. It has been, therefore, surmised that 'the object' of the defacement 'must have been to destroy the authority by which the coin was guaranteed'[76]; in other words, 'the ruler who had them defaced objected to these coins, with the symbol of Roman sovereignty, circulating in his dominions.'[77]

The various explanations of the phenomenon of defacement assume that it is a numismatic factor peculiar to India and that it is a product of Indian political conditions. Attention has, however, been drawn already to the difficulty of assuming that such mutilation is an Indian phenomenon. The hypothesis may therefore be examined in some detail.

No indigenous Indian coin of the first ten centuries, for instance, of the Christian era is known to be defaced. In those centuries, India saw many dynasties rise and fall, a few of which at least had occasion to engage in hostilities with one another, and numerous kings some of whom at least treated each other cordially, and yet defaced coins of Indian origin are unknown in this period. It has been said that 'in Northern India' have been seen 'many beautiful Greek staters of full weight, and almost Mint condition, with a deep and viciously inflicted gash across the neck'.[78] These Greeks may not easily be called Indian rulers: they took hold of certain areas lying in the north-west frontier of India, and however rapidly they might have become Indianised, are not likely to have hastened to forget their Greek hatreds. A silver coin of Heraios is known to be defaced,[79] but though Heraios was of the Kushan line, he ruled in west Afghanistan;[80] he was 'foreign to India'.[81]

A Non-Indian Phenomenon.

Though defacement was thus unknown to early India, and unknown also to Rome, it could be shown to have been a practice well-established in some of the regions that lie between Italy and India.

A gold stater, probably of Sardes, issued in the earlier half of the 6th century B.C., shows a cut directed at the obverse type, which is a lion's head with open jaws and protruding tongue.[82]

In a find come upon 'somewhere in the Delta'[83] of the Nile in Egypt, comprising coins of Greek cities issued between about 500 and 400 B.C.,[84] and being 'the result', as evidenced by 'the places to which they belong', probably 'of a trading voyage made along the coasts of the Aegean and neighbouring seas, which ended in Egypt',[85] there occurred a number of coins, issued by cities like Mende, Sermyle and Dikaia, which are defaced by deep cuts.[86] In one of them the cut is aimed at the torso of a man on horseback;[87] in two others the cut is at a device which might well have been mistaken, when worn, for a horseman;[88] in a fourth, the cut is at the incuse on the reverse instead of at the head of Herakles on the obverse.[89]

In the delta of the Nile was found another hoard of 31 silver coins drawn from cities of Thrace, Macedon, Central Greece, Ionia, Lycia and Cyprus, and of 8 dumps of cast silver;[90] the hoard was buried probably a little before 485 B.C.[91] Practically 'every one of the coins has received . . . . at least one chisel-cut.'.[92] It has been opined that since a cut is to be found on one of the dumps, 'which, of course, has no type to cancel', we have to explain 'the chisel-cut, found here on every coin' as 'a precaution against the most obvious form of fraud and not a means of "demonetizing" the coin by cancelling the type'.[93] This view, however, ignores both the multiplicity of the cuts and the savagery of many of them.[94]

Somewhere in Cilicia was discovered a find,[95] comprising silver issues of numerous Greek cities,—'the coinages of Syracuse, of Athens, and of various and islands along the coasts of Asia Minor and Phoenicia',—some 'Persian satraps in Cilicia', and also sigloi of some Persian Kings[96]. The hoard, which ranges in time from about 486 to 380 B.C., seems to have been buried about 378 B.C.[97]. 'Of the 141 coins which compose the hoard

114 are disfigured by what is generally known as "test cuts"—deep incisions probably made with some chisel-like instrument. For some unknown reason this practice seems to have been particularly common in Cilicia. The generally accepted explanation of these cuts is that they were tests for copper cores—the usual expedient of ancient counterfeiters in making their debased and spurious coins. In the majority of coins this explanation will hardly suffice. Instead of one cut (which would have been ample to detect the presence of a copper core) often as many as five or six, sometimes even more, disfigure the coin in a most effective fashion. The thoroughness of these mutilations seems premeditated, and suggests the explanation that, in the present case, these multiple cuts were intended to make the coins unfit for further circulation—in other words, to demonetize them once for all'.[99]

A coin of Sinope, occurring in a hoard of coins of Sinope and Trapezus chiefly, found in 'the Black Sea district' and belonging apparently to the fourth century B.C., bears two cuts which have just avoided the head of Sinope.[1]. Attempts at the head of Sinope are found on silver coins of about 364–350 B.C.[2] and on another of perhaps the same date but of a barbarous style.[3].

Imitations of coins of Sinope, 'faulty and unreliable in weight, produced by unscrupulous neighbours of the city' in the latter half of the 4th century B.C. were often 'defaced with chisel-cuts in order to put them out of currency', while 'the good Sinopean pieces' of the same period showed little defacement, and among the magistrates' names which figured on these good coins there appeared the name of Hikesias'. This seems to confirm 'the tradition' that Hikesias 'had been Banker or Treasurer of the State and had "paracharakted", i.e. defaced, coins was founded on the fact' that possibly 'he ordered the chisel-cutting of all inferior pseudo-Sinopean coins with a view to restoring Sinopean financial credit.'[4]

Coins of the satrap Mazaeus and of his times, issued generally from Tarsus, about the latter half of the 4th century B.C., are found defaced. On one silver piece a cut divides a corn-ear in two ;[5] on another, the hoplite on the reverse is cut at, more than half a dozen times, while the king on horseback on the obverse escapes unscathed[6]. A silver coin of about 351 B.C. bears two cuts, neither of which, however, affects the types ;[7] another coin has suffered a cut on the reverse which avoids the types altogether,[8] and a silver piece of about 330 B.C. exhibits a cut that just misses the seated figure of Baaltars.[9]

The bust of Antinous (*c.* 125 A.D.), the favourite of Hadrian, on a Roman contorniate of copper is defaced by three or four light cuts dealt transversely.[10] The cuts are not incisions to test the character of the metal, the piece being of copper, but are obviously proofs of the public esteem enjoyed by the royal favourite.

The device of defacement is thus seen to be as old as probably the 6th century B.C., and to have been freely adopted in Egypt, Cilicia, the littoral of the eastern Mediterranean, the islands dotting that sea, the Black Sea region and the empire of Persia, together with its satrapies. The object was sometimes political, due to dynastic or to civic rivalries and hostilities, or was economic, on other occasions, the financial repute of a state having, for instance, to be retrieved by a process of paracharais : occasionally, it was the clandestine method resorted to by an overawed people for giving vent to their detestation of a court favourite.

Evidence for the Roman period is unfortunately wanting, except such rare instances as the mutilation of the effigy of Antinous, but what we have learnt about defacing enables us to infer that the practice, unknown to Italy and to India, might yet, in Roman times, have obtained in areas such as Persia or Arabia where the expansion of Rome was stoutly resisted. Rome's policy was rigorous control of gold issues : she allowed silver and copper to become the badges of subjection and servitude ; she claimed sole power to issue gold : in her eyes, gold was the unfailing test of suzerainty. The premium thus placed by Rome on gold issues must have incited her rivals to neglect silver and to adopt gold as the medium of their own issues and, at the same time, to visit their wrath, at the Roman insistence on enlarging her frontiers, on the heads of the effigies in gold of the Roman emperors. The defacement must have taken place in regions such as Asia Minor, Persia and Arabia where Rome roused hostility and raised resistance.

This conclusion is consistent with all the facts before us. If defacement had its origin in Greece and in Asia Minor, it is obvious that it could have occurred on the issues of the chiefs of Greek descent who occupied portions of the north-west frontier of India and endeavoured to retain some at least of the characteristics of Hellenic culture, and that it could at the same time be absent from the coins indigenous to India. Had mutilation come to be understood in India to be a mode of expressing disapprobation the indigenous currency would scarcely have remained exempt from the vicious infection. Almost unfailing attention to the nice distinction between portraits of potentates and representations of personifications lacks reason or justification in India, while it is fraught with significance in areas which were in close contact and violent conflict with Rome. The silver issues would not have been spared and the gold issues alone attacked if the aid of the chisel had been invoked in a country where there was no special hostility to foreign gold. We have no ground whatever for the suspicion that Roman gold had a political significance in India which did not attach to Roman silver, whereas we know definitely that the policy of Rome should have evoked considerable hostility to its gold issues in the regions to the west of Afghanistan. Defaced specimens are found in Indian hoards as the coins that came to Persia or Arabia came generally to India in payment for Indian commodities ; the flow of currency was not from the east to the west and so defaced Roman pieces are absent from hoards found in Europe.

PLATED DENARII.

Specimens of one particular issue of denarii of Augustus are found in large numbers in Indian hoards.[11] It has been said that the denarii of this issue found in this country 'are nearly always of base metal plated with silver'.[12] But there seems to be no warrant for this observation : none of the accounts of the finds makes mention of this feature.[13] It has been also said that 'the Indians found' these coins 'much to their liking', and that 'barbarous imitations continued to be made in considerable numbers for many years after the originals first appeared in India',[14] but the occurrence of such imitations in finds seems to have gone unrecorded[15].

None the less, surmise on surmise has been made on the hypothesis that these phenomena have actually been observed in this country. Not only has a suggestion been made that these plated pieces 'were purposely issued for trade with India',[16] but it has even been suggested that 'they were struck especially for trade with South India where the natives could not as yet distinguish good Roman coins from bad'.[17] It has been objected that the evidence relied on for the view that the plated denarii were manufactured for export to the east 'is subject to serious question' and that 'it seems improbable that Rome can have seriously considered a policy so certain in the long run to defeat its own aims'.[18] True it is that a good proportion of the denarii found in this country is of this variety, but that is nothing unusual, for 'the immense numbers in which they were struck[19] should give them a disproportionately large representation in any normal hoard covering that period,— especially if they went into the earth before the currency reform of Nero. All, except one, of the Indian hoards of denarii belong to the pre-Neronian reform period, and so this particular issue of denarii is represented in full strength in the Indian hoards. Even in European hoards, 'plated coins of the period before Nero are particularly common',[20] and if they appear to be more numerous in the hoards than the good ones it is because they survive ' more easily than the coins of good metal'.[21]

None the less, the fact of the occurrence in India of plated pieces among the coins of this issue and of imitations of this issue has been admitted without question, and,— what is more,— a problem has been posed on the admission : it not having been 'the custom of barbarians in antiquity to imitate coins of bad quality', we have in the Indian finds 'an exception to the general rule', and the exception 'awaits explanation'.[22] The Indians of ancient times,— the 'barbarians' whose *penchant* for these coins is said to stand in need of explanation,— were themselves experts in plating coins. Their earliest effort at adulterating the currency was to introduce plated pieces among the coins of the punch-marked variety, which they used fairly early in their history : 'some coins are formed of a copper blank thickly covered with silver' : but, 'this contemporary (if not time-honoured) sophistication of the currency is found to occur subsequently in various Indian coinages, in the Graeco-Bactrian of the Punjab, the Hindu kings of Kabul, and later still in various Muhammadan dynasties of the peninsula'.[23] It has been found that 'the plating is extremely well executed and of the most durable character'[24],— so durable indeed that 'these coins till thoroughly worn were in look and finish equal to those composed of silver throughout'.[25] Those who were skilled enough to plate coins so well are not likely to have lacked either the skill needed to fabricate the imitations so well as to escape detection or the

IMITATIONS.

A few of the Indian finds comprise coins which seem to be imitations of Roman and Byzantine issues.

The earliest of these pieces is apparently an imitation of a denarius of 83 B.C.,[26] but the execution is so good that it is in all probability a counterfeit manufactured very shortly afterwards in Italy itself.

Another early piece, 'the types' being 'well rendered' and 'the legends badly blundered,' imitating the most voluminous of the issues (c 26–37 A.D.) of Tiberius,[27] has come from India, but whether it is a 'native' imitation deserves consideration.

The next in time is a gold coin found in south India which combines an obverse of Hadrian with a reverse of Antoninus Pius; [28] a blunder has intruded itself into the obverse legend and a meaningless excrescence has been added to a character on the reverse. That it is an imitation is undoubted, and it must be an ancient attempt.

A gold coin which turned up without companions appears to be an imitation of an aureus issued in honour of Faustina I, 141–161 A.D. ; the piece seems to be a cast [29].

Of two coins discovered in the Rewa treasury [30], one had 'a suspicious look' ; had it been genuine, it would have been a coin of Commodus (177–192 A.D.).[31] The other was an imitation of a piece of Clodius (193–7 A.D.)[32]. The probabilities are that both the pieces are imitations. The two gold pieces of the Upparipeta find [33] are obvious imitations, the originals being probably aurei issued in the names of Sabina in 134–8 A.D.[34], and of Julia Domna in 196–211 A.D.[35].

The coin of 'impure silver' bearing a 'blundered legend' which was obtained in Bombay [36] is perhaps an imitation of a coin of Gallienus issued in 253-4 A.D.

The Gumada find [37] is very interesting for its composition. While two of the pieces are genuine issues of Septimus Severus, assignable to 200–1 A.D. and 202–10 A.D. respectively [38], all the others are imitations. The die-struck pieces among them imitate coins of the times of Commodus, Clodius, Septimus Severus, Paracalla and Geta, ranging from 175 A.D. to 211 A.D. The cast pieces are all copies of coins of Septimus Severus issued between 200 A.D. and 210 A.D. Two pieces have the reverses hammered out of recognition and they are probably imitations of an issue of Constantinus II (395–6 A.D.) or other emperor having a resemblance to him and of an issue of Constantine the Great, 305–337 A.D.

Somewhere else in India was found another gold piece imitating an issue of Septimus Severus.[39] Of the four solidi of the Malayadipudur find,[40] terminating with a solidus of Anastasius, 491–518 A.D.[41], all but the latest are imitations of issues of Theodosius II, 408–50 A.D. 'A thin bracteate-like piece with barbarous legend', found 'probably in southern India', is an imitation of the solidus of Justin I, 527–38 A.D.[42].

The piece simulating the Sabina [43] aureus seems to be the first of the imitations to be fashioned by hands to which the Roman style was entirely foreign [44] : other imitations follow with some regularity, and the latest is one counterfeiting a solidus of Justin I.[45]

The imitations cover therefore a range of four centuries. The occurrence of these pieces in India has led to the formulation of an impression that their manufacture should be imputed to the land in which they have been found [46].

The weights of the several pieces that appear to be imitations seem to indicate pretty clearly the periods in which they could have been respectively fashioned.

The hybrid aureus bearing an obverse of Hadrian and a reverse of Antoninus Pius[47] weighs 7.33 gm. This weight agrees fairly with the standard obtaining in the days of Antoninus Pius,[48] but is much higher than the weights of the aureii of his successors, for in about sixty-five years the standard fell to 6.48 gm.,[49] and it kept falling steadily. The only other power to issue gold in this period was the Kushan dynasty in and to the north-west of India and their issues, ranging in time from about 78 A.D. to about 220 A.D. kept steadily at about 7.98 gm. [50] The hybrid aureus could therefore have been fashioned neither in the vicinity of north-west India where the weight-standard was different,[51] nor much after the time of Antoninus Pius, when the Roman standard had declined considerably.

The imitation of the Faustina aureus[52] being 7.02 gm. in weight,— a weight that was receded from within about a quarter of a century from Faustina,— might not have been fashioned in the Roman area later than about 185 A.D.[53] Of the two pieces found at Upparipeta,[54] the one that seems to copy the aureus in honour of Julia Domna (196–211 A.D.)[55], weight 6·88 gm.,— a weight that is well within the range of the variations observable in that period,[56] and is higher than the weight, 6·48 gm., that was adopted in 215 A.D.[57],—and so is liable to be attributed to a date between 196 and 215 A.D. The other piece, imitating the Sabina aurei (134–8 A.D.) [58], weighs 6·61 gm. and may have been struck just a little before 215 A.D.

The imitations comprised in the Gumada find [59] are interesting. Howsoever we group the pieces which appear to have imitated the coins issued between 175–6 and 210–11 A.D.[60], we find that there was no stable weight-standard in the period and that the variations were quite capricious.[61] This conclusion is enforced by the circumstance that though six of the pieces copy one of the issues of 205 A.D. [62], yet, two of them, which are but slightly worn, differ from each other substantially in weight [63], and two others, equally affected by wear and similarly pierced with holes, differ in weight even more markedly,[64] and the piece which looks freshest ranks but third in weight.[65] But, as all of them weigh more than 6·48 gm., the weight which was adopted as the standard in 215 A.D., we may well take it that they were all fabricated before the issues based on the standard adopted in that year came into vogue. The find includes two other pieces copying coins issued probably between 305 and 337 A.D.,[66] but their weights [67] being much higher than the standard in vogue then or later, it is not possible to infer from the weights the periods in which the pieces could have been fashioned.[68]

These are the only imitations in respect of which an attempt could be made, on the basis of the weights of the pieces, to determine approximately the periods in which they could have been manufactured.[69] If we may judge solely on this basis, it seems to be clear that many of the imitations were fabricated almost contemporaneously with the originals which they simulated and that none of them was fabricated later than about a quarter of a century from the dates of the respective originals.[70] The only explanation for such a phenomenon would seem to be that, in the regions where the imitations were ventured on, the regular currency was exceedingly small in volume and that the imperative needs of commerce and other economic intercourse compelled the peoples of these regions to supplement the regular currency with local issues simulating the authentic pieces.

That these imitations, except that of the denarius of 83 B.C., [71] could not have been fashioned in Europe seems to be established by their being very different in style from the imitations that have turned up at various places in that continent : even the pieces that are branded as 'barbarous' by numismatists in Europe are much closer to the originals than those found in India.

None of the types or adjuncts figured on the pieces known to be imitations shows traces of having been affected by Indian examples. The busts or heads on the obverse and the standing human figures on the reverse are copies of Roman originals. The costume, the jewellery, the implements of sacrifice, the weapons of war and other objects figured on the pieces betray no signs of an adaptation that would make them resemble in any degree the corresponding Indian originals. The legends too are not in characters bearing any resemblance to the graphic systems then in vogue in this country, except on some coins from the Gumada find.[72] When types, adjuncts and legends show no indications of having been affected by Indian influences, it is difficult to accept that the imitations could have been manufactured in India.

Where the Imitations originated.

Some light on the problem of where and under what influences the imitations could have been manufactured is thrown by the Gumada find which is composed of a curious assortment of pieces. Only two of the coins are genuine, and they are issues of Septimus Severus[73] ; the rest are imitations.

In the opinion of a high authority,[74] the imitations are all 'very rough copies and it is not feasible to mention any exact original of them', for 'even the types only copy originals somewhat freely'. It has been suggested by the same authority that eleven of them are copies of aureii of Septimus Severus, and that another is a copy of an issue of Constantine the Great. Originals for six of the other coins have also been ventured on very tentatively in the hope that the venture would provoke others to establish more satisfactory identifications. The accompanying table shows at a glance the main features in these pieces that have to be borne in mind. A striking feature of the imitations is the marked difference between the character of the types and that of the legends. The types whether on the obverse or on the reverse, are invariably Roman, and there is nothing in the style of the execution to raise a suspicion that the coins were fabricated by others than 'Romans'. At any rate, there is nothing to warrant a belief that any of them could have been produced by Indian craftsmen. The busts or the heads on the obverse, especially of Septimus Severus, are easily recognizable, and the other types are characteristically Roman in style, though a few of them might be rough in execution. The legends, however, are curious enough to raise reasonable doubts about their having been produced by 'Roman' engravers. They deviate considerably from those on the coins which have been cited as being the originals : the utter absence of any correspondence between the legends on the imitations and those on the suggested originals

precludes all possibility of the former being either imitations or degenerations of the latter. Indeed, it may be said that if the originals of these pieces are to be sought for, taking only the legends into consideration and ignoring the types, it would be impossible to point to one Roman issue that could be accepted as a possible original.

Classification of the Imitations in the Gumada Awo Find.

Class.	Number. Cat.	Number. Corp.	Date.	Emperor.	Weight in con.	Obverse.	Reverse.
			A.D.				
I	162	445	175–6	Commodus ..	6·75	ATHIVI●●PIVIIIC ..	IVIVI●●IVIV.
	165*	459	196–7	Sep. Severus..	6·68	IIAVIVII●●IVITVIG ..	VIIIVI●I●I●VIIB.
	170*	464	202–10	Do. ..	6·92	IVICIVIO●●IVIVIOIVI.	●VICIOI●VIIVICI.
	179*	473	210–1	Do. ...	6·75	NIITI●●PIVNIIB ..	IVIO●●CVI.
	181	475	211	Geta	6·77	IIVCIVT..●●VIVCIC ..	IVI—IVIIVICIV●.
	168	467	202	Sep. Severus..	6·97	SVEVEIS●PIVSAVB ..	AITAVII●●IVIVIVA.
II	163	447	180	Commodus ..	6·95	VA●●ATG	ATPGI-OVITOVMOC●.
	164	457	195–6/7	Clod. Albinus.	6·86	VVIVƎAV●●IVZEYIVT.	WNVI●I●OVEVII.
III-(a) 1	171*	469	205	Sep. Severus..	6·67	ATVIIIIIVIIWC	CSIVYICVIJI.
	172*	469	205	Do. ..	6·95	Do.	Do.
	173*	469	205	Do. ..	6·73	Do.	Do.
2	174*	469	205	Do. ..	6·78	Do.	Do.
	175*	469	205	Do. ..	6·76	Do.	Do.
	176*	469	205	Do. ..	6·79	Do.	Do.
(b) 1	177*	470	206	Do. ..	6·55	VIV—AV●PIVATVI ..	Sε.
2	178*	470	206	Do. ..	6·58	Do. ..	SE.
IV	186*	..	..	Constantinus Magnus.	7·70	....	....
V	184	..	..	..	7·05	....	....

* Those marked with an asterisk are those for which originals have been suggested by Mr. H. Mattingly. See p. . . . . The wicks in black indicate the holes punched into the pieces for stringing them together. The numbers of the pieces that bear cuts on the obverse are shown in italics. Shading with lines from right to left indicate obscuration of legend owing to wear or corrosion or to inefficient striking; shading with lines from left to right indicates obscuration through double striking, etc.

The imitations in the find invest the hoard with the character of a queer puzzle : while the types are all Roman, and indisputably so, the legends are far from being Roman. The pieces have therefore all the appearance of being freaks, but we cannot accept them for such till we have excluded other possibilities.

If we classified these pieces according to the legends on them they will be found to fall into five main classes[75]. The first class, consisting of six pieces, bears legends, which, both on obverse and on reverse, run in Latin characters and seem to be debasements, ultimately of Roman legends. The second, consisting of two pieces, bears characters most of which appear to be Latin, but a few have the look of being Greek. The third, comprising a set of eight pieces, bears legends on the obverse which are similar in character to those on the pieces of the first class, but the characters on the reverse, which are by no means clear on some of the pieces, have no similarity to either Latin or Greek : such resemblance as may be traceable to any characters then in vogue in India is to those of the Brahmi script. The fourth class as well as the fifth is each of only one coin, and the reverse of each coin being hammered out, type and legend are wholly untraceable. The legend on the obverse of the coin of the fourth class is but faintly traceable and appears to have some resemblance to Brahmi among the Indian alphabets, while that on the piece of the fifth, judging from the graphic peculiarities of the few characters that could be traced, is neither in Latin or Greek, nor in Brahmi or Kharoshthi, but may be in one or other of the scripts, other than Greek or Latin, which were then current between the Mediterranean littoral and the western confines of Afghanistan. Such diversity is of considerable interest when appearing in one hoard, but the interest is enhanced by the circumstance that the diversity appears to be still greater on closer examination and that it seems to furnish clues leading to the determination of the birthplace of these pieces. Let us therefore examine these pieces a little more carefully.

The first class of coins is an assemblage of quite a disparate set of pieces : not one legend, whether on the obverse or on the reverse, is like any other : not one of them yields any sense: groups of letters recur in them with wearisome unmeaningness [75a]. : the legends have all the appearance of being made up of a jumble of characters. Still a few clues pointing to their character and origin would seem to lurk in them. A few groups of letters look as if they were debasements of blunders of bits of Latin legends[76] : though these bits are not enough to enable us to determine what the original legends were, they are still helpful inasmuch as they show that they were in all probability Roman. Indeed, one of the coins of this group bears a legend the ancestor of which could be traced and identified as indisputably Roman[77].

It is thus a composite of various sets of pieces,—one coin bearing a legend that is a second or third debasement of a Roman legend[78], three pieces bearing bits of Roman legends copied probably four or five removes from the original[79] and two other pieces bearing legends so debased as to be about six or seven removes away[80].

The two coins of the second class seem, however, to tell a different tale. On a casual examination they do not appear to be different from the pieces of the first class, but a close scrutiny reveals a distinct difference[81]. Some of the characters on one of the two coins[82] may not be only Greek but may together make up a Greek word[83]. On the other piece[84] appear characters that are undoubtedly Greek[85], and, it is also possible to read one of the legends[86] in such manner as to raise a suspicion that it is a peculiar combination of Roman and Greek elements alluding to a Roman Emperor by name and style, the name being Aurelian and the style being the Greek equivalent of Emperor[87].

All the eight coins of the third class bear legends on the obverse and the reverse in Latin characters similar in style to those on both faces of the coins of the first class : the resemblance is close indeed, for these too are equally unintelligible and we have in them the same recurrence of not only unmeaning groups of characters but also of blunders of Roman originals[88]. They divide into two main sub-classes if we look at the major differences in the legends on both faces,—the two sub-classes differing from each other in respect of the

legends on both faces. The first sub-class[89], comprising six pieces, bears legends on obverse and reverse that are practically identical on all the pieces, but if we took note of minor differences in the obverse legend we could sort them out into two batches[90]. The legend that appears, however, on the reverse is more important but is less clear. It is fairly clear on one of the pieces[91] and somewhat faint on another[92] and scarcely visible on the rest[93]. In spite of the variations in the clarity, the legends on the pieces seem to be identical and to betray a closer resemblance to the Brahmi among the Indian systems of writings—if we restrict the comparison to Indian alphabets, the pieces having occurred in India. But, it is not easy to read them into any intelligible concatenation[94]. If we look again at these pieces and carefully scrutinize the minutiae of the reverse legend, we find that on one of the pieces that bear it in the most indistinct form[95], the legend turns out to be a faintly impressed version of the Roman legend found on most other coins of the hoard. The second sub-class, which comprises two pieces, bears legends that are identical, though different from the legend on the pieces of the other sub-class. But the legends on the reverse, though the characters number only two on each and appear to be similar, may yet not be identical, for a character on one of the pieces[96] is so damaged that a definite conclusion is not possible. If the characters are to be taken to be in an Indian alphabet, they appear to be Brahmi, but no sense could be got out of the legend,—or legends[97]. Inspite of this class of coins exhibiting characteristic peculiarities it has points of contact with the first. The eccentricities of the one class correspond to those of the other, as has been already pointed out. The obverse legends on the pieces of this class are so closely akin to the obverse legends on three of the coins of the other class[98] that the two classes seem to be very close relations indeed. One legend of the first class looks the ancestor of legends of the third[99]: another legend of the first class seems to be a collateral of legends of the third[1]: at the same tim , a legend of the second class appears to be the predecessor of a legend of the first[2]. We may therefore conclude that the two classes are but modifications from the same genus.

The fourth class resembles the third in that the only legend now traceable on the piece looks like Brahmi[3], but differs in that while the legend occurs on the obverse on this piece, the similar legends on the pieces of the third class occur on the reverse. The piece having suffered by its reverse being obliterated, we may not be sure that the legend on that face could not have been in that variety of Latin or Greek characters found on the other coins of this hoard, but, if we may speculate on the fact that this piece is a century later than the pieces of the third class and on the phenomenon of a Brahmi-like legend appearing on the obverse of the later coin, we may hazard the suggestion that on this piece the legends had been inscribed in Brahmi-like characters on both the faces. The emperor's head on the obverse being Roman, even in style, and being executed with a fairly high degree of faithfulness, we cannot decline to assume that the type on the reverse should have been Roman in content and in execution. It follows, then, that both faces might have borne types that were Roman but legends that resembled Brahmi.

The affiliations of the pieces of this hoard seem to be many: with India and Brahmi, on one side if the legends are to be taken to run in an Indian alphabet: with Italy and Constantinople and Latin on another; with Greek on the third, and with some country between the Mediteranean and the Hindu Kush, on the fourth. The proofs of affiliation with Rome and Constantinople cannot but be obvious on coins issued from Rome or Byzantium or on pieces issued on the pattern of such coinage and they do not require to be accounted for. The vestiges of association with the lands stretching for hundreds of miles on either side of the Tigris and the Euphrates are the factors for which an explanation must be sought.

The Brahmi-like legands on the pieces of the third and the fourth classes would seem to raise a presumption that those pieces were fabricated in India, but they being, so far at least as the obverse legend are concerned, homogenous with the coins of the first class, the presumption of an Indian origin would seem to be applicable to all the coins of the hoard, except the piece of the fifth class.

Resemblance to Western Kshatrapa Issues.

The presumption of Indian origin would seem to gain some strength from the circumstance that the corrupt legends,—Latin or Greek,—on the pieces of this find seems resemble in some measure the corrupt Graeco-Roman legends on issues of the Western Kshatrapas of India. If the corrupt legends on these pieces could be shown to bear some real resemblance to those on the Western Kshatrapa issues and if the Brahmi-like legends could be shown to be really Brâhmi, the case for an Indian origin would be well grounded.

The accepted views on the silver coinage of the Western Kshatrapa line may be summarised in brief. They are apparently imitated, as regards size, weight and fabric, from the hemi-drachms of the Graeco-Indian kings[4], and 'from the same source too, and probably also partly *from the Roman denarii . . . they derived their obverse type . . .* and the Graeco-Roman characters of their obverse inscriptions'[5]. The obverse legends on the issues of Nahapana and Castana, the earlier members of the line, are 'in Greek, or more correctly Graeco-Roman, characters'; the letters 'are undoubtedly Greek with an admixture of Roman characters'; there are 'endless variations in the representation of the Greek and Roman characters, due no doubt to imperfect knowledge' of the characters 'on the part of the die-cutters': the legends on the reverse express the name and style of the ruler in the Prakrit language, but in two scripts,— the Brahmi and Kharoshthi,— and the legends on the obverse are not translations but transliterations of those on the reverse[6]. On the issues of the rulers beginning from Castana's grandson, Rudradaman I, the obverse legends become unintelligible[7], and they have been taken to be progressively corrupt renderings of the earlier legends, though occasionally the corruptions themselves became standardized for some little while: 'generally it may be said that no attempt to explain as significant the inscriptions in these characters on coins subsequent to Castana has hitherto been successful; and that the probability is that they then ceased to have any meaning and continued to be imitated or repeated simply as a sort of ornamental border'[8]. On these coins 'there seem often to be reminiscences of . . . commonly recurring Roman formulae'.[9] Later still, the inscriptions 'become more fragmentary, but the fragments can . . . be referred back' to the earlier 'stereotyped form'[10]. If later there was intrusion of a form that was altogether abnormal'[11] there are also indications of 'a subsequent reversion to the old form'[11]

The Gumada Hoard.

Of all the pieces of the Gumada hoard, the two belonging to the second class are those that resemble most closely the earliest Western Kshatrapa issues: both series contain Greek characters. But this is all the resemblance. While the whole of the inscription on the issues of Nahapana and Castana has been shown to be intelligible, only fractions of the legends on the two pieces might have a meaning[12]. The Latin characters in the legends on the issues of Nahapana and Castana are very few, whereas on the two pieces from Gumada they are relatively more numerous. The legends on the former series, though written in Greek characters, are in the Prakrit language, whereas the legends on the latter are Greek, both in the alphabet and in the language. The differences go deeper. The issues of the Western Kshatrapas are essentially Indian: the obverse type is that of the Indian ruler,— the head of the member of the line for the time being,— and the reverse type is wholly Indian: the reverse legends are in Indian characters and in an Indian language: the obverse legend too is in the same Indian language, the characters alone being Graeco-Roman. But, on the two coins from Gumada, there is no element whatever that could be pointed to as being Indian in any degree. While the issues of the Western Kshatrapas would, even at a glance, be readily and definitely treated as absolutely Indian, except for the Graeco-Roman legend, the two pieces from Gumada bear no indications whatever of an Indian origin, or even of Indian associations. The only ground for suspecting an Indian origin for these two pieces are the provenance and the corruption of the legends. But as the corruption shows no vestiges pointing to the impact of any kind of Indian influence, it might have occurred anywhere in the lands between Italy and India.

The legends on the coins of the first of the classes into which the imitations of the Gumada hoard have been grouped do not include any characters that could be definitely called Greek; all the characters may be accepted without demur as being in the Latin alphabet. In spite of the legends being now unintelligible, it is still possible to discern in them, as has been pointed out already, fragments of legends that are genuinely Roman; the fact of degeneration is borne out by vestiges of the original legends being still traceable. While these legends are therefore Roman in the palaeography and in the content, in so far as the corruption would allow us to determine both, the obverse legends on the coins of Nahapana and Castana are predominantly Greek in palaeography,—with just a little admixture of the Latin element,—and Prakritic in content. While the characters of the legends on the obverse of the earlier Western Kshatrapa issues are different from those of the legends on the reverse, though agreeing in content, the characters of the legends on both faces of the first class of pieces from Gumada are drawn from the same alphabet and represent legends differently worded. The types too differ,—being purely Roman on the Gumada series and purely Indian on the Western Kshatrapa series. No relationship would therefore seem to be traceable between these two species of coins.

A comparison, however, with the obverse legends on the issues of the Western Kshatrapas later than Castana seems to be more promising. The legend on the issues of Rudradaman I, the successor of Castana, and the similar legends on those of his successors, are made up of meaningless repetitions of certain letters,[14] and, strangely, the legends on the pieces of the first class in the Gumada find are also made up of repetitions,—and of repetitions of the same letters,—though the combinations vary and therefore the products of the combinations also. This similarity is unmistakable, and even if it stood by itself would call for explanation. But the resemblance seems to extend further. The obverse legends on the issues of the post-Castana Kshatrapas are composed of characters which seem to belong to the Latin alphabet, or, at any rate, look like corruptions of letters of that alphabet,[15]—a circumstance which marks them off from the obverse legends on the issues of Nahapana and Castana, which are composed of Greek letters, though interspersed with two or three Latin characters. The difference between these two species of legends does not seem to be capable of being expressed in terms of the extent to which the Roman element enters into a legend that was essentially Greek: it looks as if it would be wrong to assume that through a persistent infiltration of the Roman element a legend that was Greek came to be predominantly Latin. A close examination of the post-Castana legends seems to show that no Greek element is traceable in them: none of the characters has the appearance of being Greek, and none seems to be necessarily a debasement of a Greek character. The peculiarities of the legends would seem to be easily explainable on the hypothesis that they are the result of the progressive debasement of a Latin legend: the assumption that they are the corruptions of a Greek one looks unnecessary. If this view is well-founded it would follow that the post-Castana legends are not derived from the legends of Nahapana and Castana and that they should be traced back to an original that was either Roman or had Roman affinities. The accepted view is that the predominantly Greek legends of Nahapana and Castana suffered debasement under them so rapidly that the post-Castana legends could not but be in the direct line of descent. But this view does not appear to be reconcilable with the facts: even the most corrupt versions of Nahapana's legend have not ceased to be predominantly Greek,[16] and what we know of Castana's legend stamps it as Greek in no less a degree. It is difficult to see how legends so predominantly Greek got transmuted, immediately on the death of Castana, into a legend so completely Roman,—at least, so predominantly Roman,—as we seem to have on the issues of Rudradaman I. Either the view that the post-Castana legends are Roman should be mistaken or we should agree that the Graeco-Roman characters we start with under Nahapana could suffer corruption in such manner as to deteriorate under Rudradaman I into Roman letters.

That a Roman legend might have been the forebear of the legends of Rudradaman I and his successors is probabilised by 'the arrangement of the inscription,' which is 'interrupted by the bust, not continuous all around the coin[17]',— a feature that marks a departure from the pattern of the Indo-Greek hemi-drachms to that of Roman denari. The presence of another feature which would emphasise the probability has been averred,—it being said that vestiges of 'commonly recurring Roman formulae' are traceable in the post-Castana legends.[18] Such formulae form no part of Greek legends or of the legends employed by the vassals of Rome in regions where Greek being the traditional language of coin legends the names of Roman emperors and their style were turned into Greek: so, a legend that incorporates such formulae could not be Greek or semi-Greek, but must be Roman. But, it is difficult to be sure of the presence of corruptions of the formulae in the post-Castana legends [19]: no combination of characters seems to yield even corruptions suggesting the originals of the formulae. The post-Castana issues could not have been indebted to Roman issues for anything but the obverse legends, for the former do not differ in other material features from the issues of Nahapana and Castana: the types on both faces and the reverse legends continue to be indigenous. But we can find no trace of a motive for a change in the characters of the legend when the other main features were retained. Even if a motive could be found for Rudradaman I, immediately on the death of his father Castana, adopting the Roman characters in preference to the Greek, none whatever could be suggested for his adopting a Roman legend in a form so corrupt that it could have no meaning to any one. The view that the legend of Rudradaman I is only a further corruption of a legend in Greek characters that had already become corrupt would be more acceptable, but two considerations weigh against its acceptance. We do not know for certain that the legend of his father Castana suffered the corruption that affected the issues of Nahapana: if Castana's legend was not corrupt enough to have been the prototype of his son's wholly debased legend, it is difficult to see why the son should have preferred to derive his legend from the debased versions of the legend of Nahapana. Nor can we be sure of the

phenomenon of progressive debasement in the issues of at least Nahapana. The reverse legend in Brahmi has not been found on any specimen 'in either an incorrect or an abbreviated form'.[29] Yet, 'the coins which have the purest form of the Greek transliteration on the obverse have as a rule the worst executed Kharoshthi inscriptions' on the reverse, and on the specimens on which the Greek legend is very corrupt the Kharoshthi legend is perfect.[31] This is 'curious and decidedly puzzling[32]', especially as no palliation could be sought for in the corrosion or the wearing out of the legends, a huge hoard of the coins having been found 'in an excellent state of preservation[33].' If we postulated that it was the Greek legend that deteriorated, then the Kharoshthi legend should have started in a very debased version and improved steadily till it became quite regular : if, on the other hand, we assumed that it was the Kharoshthi legend that suffered debasement we have to believe that Nahapana started with some corrupt Greek legend and worked it up gradually into a perfect expression of his name and style.

A decision on the point whether the palaeography of the obverse legend of Rudradaman I points to a Greek or to a Roman ancestry being thus difficult to arrive at, we need not expect the obverse legends on the coins of the Western Kshatrapas to help us in regard to the determination of the origin of the legends on the pieces from Gumada.

Of the legends on the reverse of the pieces of the third class of the Gumada hoard, the two short ones[24] yield no clues whatever. Of the six long ones[2,5] two alone are clear, but the traces of the characters visible on the other four could still be made out sufficiently to support the conclusion that they are but vestiges of only one legend,—the one that is clear on the two pieces. If we took that legend to be in Brahmi characters, to which it has a superficial resemblance, we may read it with difficulty,—equating the letters on the coins to the Brahmi characters resembling them most,—but we are unable to extract any sense out of the readings so obtained.[26] It cannot represent even a first or a second stage in the debasement of a Brahmi legend, for then it would be understandable at least in parts : it may not represent later stages as it would not then bear so close a resemblance to Brahmi. The resemblance to Brahmi must therefore be treated as merely deceptive and accidental. We may therefore abandon the hypothesis we have so far adopted,—that the non-Roman,—or non-Graeco-Roman,—characters on the coins of the hoard are Brahmi,—on the ground of the Indian provenance of the hoard.

On one of these pieces,—the third in that class as marshalled in the Table,[27]—the legend turns out, on close examination, to be no more than a combination[28] of the Roman characters which we find on the other face of these pieces and on both faces of other coins of the hoard. What is more, some of the letters are seen to be quite similar to those on the Brahmi-like legends and to occur at exactly the corresponding positions.[29] Even more surprising is the fact that two of the characters which look most like Brahmi are really close relations of Roman letters : one of the two characters[30] is the result of a slight modification of a Roman letter, and the other[31] is the product of a blending together of two letters of the Roman species. What we would have summarily dismissed as impossible has actually happened : a Roman legend has, with just a few modifications here and there, been turned into a Brahmi-like legend. The conclusion is irresistible that the Brahmi-like legend on the other five pieces too is an adaptation of a Roman legend, and that the coins of this sub-class have had the same origins as most of the other pieces of this hoard.

The close similarity of the characters of the legend to those of the Brahmi alphabet is, *prima facie*, an argument in favour of the imitation having been executed in India. That the characters do not quite conform to the norm in Brahmi and that they form a concatenation which is wholly unintelligible are no valid arguments against the corruption being treated as the handiwork of Indian craftsmen : the source of such corruption is generally a mistake in apprehending the original, and an indistinct Roman legend is as likely to have been mistaken in this country as in other non-Roman areas. That the obverse legend is in foreign characters is also not an objection to the coins having been fabricated in India, for bilingual legends, one of which is in a foreign language, had been already introduced into India by the Greek rulers of Bactria and the settlements on the Indian frontier, perhaps following a bilingual tradition derived from the coinage of the Achaemenids. None the less, it need not follow that the imitation was on Indian soil.

To hold that the characters resemble Brahmi and that therefore the hoard must have had an Indian origin is to argue in a circle. Having at the start of the discussion restricted the comparison of the legend to Indian systems of writing, we found that the legend approximated to Brahmi, but we may not go further and conclude that the resemblance to Brahmi excludes resemblance to a system of writing which might have been current beyond India. I, we discern traces of similarities with a non-Indian graphic system we cannot refuse to consider the probability of the imitation having been fabricated beyond the frontiers of India.

Most of the characters of the legend on the five pieces bear a fairly close resemblance to characters in two alphabetic systems in vogue between the Levant and Afghanistan,—Arsacidan Pahlavi and Elamitic,—both of which are found on the coins of the nearly contemporary rulers of those regions.[32] Had the attempt at imitation been made in the areas in which either of those alphabets was current, it is not unlikely that the result would have been exactly what we find on these pieces.[33] There seems, therefore, to be no ground for attributing an Indian origin to these pieces in preference to an origin either in Parthia or in the lands to the west of that country.

The chances of a non-Indian source for these pieces would be improved if we could be surer than we are that the coin of the fifth class[34] was struck somewhere around Persia.[35]

We have already seen that the coin of the fourth class,[36] which bears the bust of Constantine the Great, on the only face that is now clear, might have borne a similarly Roman type on the other face and Brahmi-like legends on the other faces.[37] But the legend as we find it need not necessarily be a corruption into Brahmi: if we go by the appearance of the characters,—and that is the only basis we can now proceed upon,—some characters in Chaldaean Pahlavi are quite as close to the letters on our coin as the letters in Brahmi.[38]

Having thus passed in review the Brahmi-like legends on the third and the fourth classes of the coins from Gumada we have found no reason to conclude that the legends though resembling Brahmi and we have also found that it is not quite improbable that they are in some of the characters then in use in Persia and in the countries to the west. The determination of the region in which the legends must have suffered corruption depends therefore not upon a study of palaeographic features alone but of general factors as well.

We have already seen that the coins of the hoard exhibit a striking homogeneity, even in the legends.[39] The weights are practically identical and are throughout in conformity with Roman standards. The types are wholly Roman and have suffered none of the debasement that mars the legends. Even the debased legends are ultimately traceable to Roman prototypes. They have not been adapted in the least to suit an Indian career: no legend is provided in an Indian script as on the Indo-Greek issues, nor in two Indian scripts as on the issues of Nahapana and Castana, nor in an Indian language as on the issues of all these: the types are not Indianised as on the issues of the Indo-Greeks, the Kushans and the Western Kshatrapas. The pieces remain essentially Roman; there has been no attempt to approximate them to Indian issues and no endeavour to acclimatise them to India. Many of them have suffered defacement,—a feature that is foreign to India, but is, in all probability, peculiar to those regions. In the days of Septimus Severus and the other Roman emperors whose coins are found imitated in this hoard the Kushans kept the country well supplied with a gold currency, and by the time that the latest coin in the hoard,—the imitation of a piece of Constantine the Great,—could have reached India, the Guptas had emitted plenty of currency in gold. Roman coins themselves were flowing in, all the time, without let or hindrance. There was thus no dearth in India of either indigenous currency or of imported coins, and therefore no need for a multiplication of currency by resort to the fabrication of imitations.

We may now contrast the conditions in India with the conditions in Persia and the countries to its west. If the imitations were by persons familiar with the Arsacidean Pahlavi, the Elamitic and the Chaldaean Pahlavi scripts,—those in which many of the legends of the Gumada hoard might be taken to have run,—were in vogue in the period covered by the coins of the hoard, all the pieces could have had their origin in those countries. In those areas and in the period covered by all but the two latest of the pieces in the hoard, the influence of Rome stood high, and Roman currency would have completely displaced local currencies but for the readiness of Rome to allow the local currency systems to function and survive in silver and brass. These Asiatic currencies having grown up under the influence of Greece, the legend on one face of many of the coins was in Greek, and in the local script on the other face, but occasionally the desire to copy Roman legends led to the adoption of a few legends in Roman characters; [40] on the issues, for instance, of the kings of Edessa in the period covered by the hoard, the Roman emperor's bust was placed on the obverse and his name and style added in a Greek legend, while the local king's name and style appeared on the reverse in Greek.[41] The need for gold currency was supplied by the issues of the Roman emperor, coining in gold being jealously guarded as an imperial prerogative. An exception having been made in favour of the kings of the Cimmerian Bosphorus, they issued a gold coinage bearing on one side their busts, names and titles, but on the other face the bust of the Roman emperor was placed.[42] So, the systems of currency obtaining in this region

were quite varied, and three influences,—the indigenous, the Greek and the Roman,—were actively interacting on one another. Yet, so firm was the grip of the Greek influence that it overshadowed the other influences. The hoard reflects very faithfully the varied conditions obtaining in the region, and yet exhibits a striking homogeneity. It is in this region, where there was such a welter of influences and yet a domination of one influence over the others, that one would expect such a varied and yet homogeneous hoard to have had its origin. We cannot account for the diversity and the homogeneity had the coins been imitations fashioned in India. That the legends we have on these pieces seem in the main to be corruptions of Roman legends and not of Greek ones is not a consideration that need militate against this conclusion : all the pieces are imitations of Roman aureii, and the corruption that set in could naturally operate only on the Latin legends on them, and could by no means affect legends that they did not bear. The debasement took place in a region charged with Greek influence, but it affected the legends on the coins that suffered the debasement,—and those legends were in Latin. This region suffered from a paucity of currency in gold, and depended mainly on Roman issues, till the Sassanids came into power in 226 A.D. ; even then, the supply of both Roman and Sassanian gold was never adequate to the demand,—especially when the Roman issues were being drained steadily to India. The need for gold currency supplementing the accepted issues of the Romans and the authorised issues of the Sassanians must have been an incitement to the unauthorised manufacture of coins on the spot so as to secure the volume of currency required for internal trade and for export to India. Such private endeavours to eke out the deficiency of the currency started, very probably, about the days of Hadrian, to which we have to attribute the first of the imitations found in India,[43] and continued steadily till under Septimus Severus and his immediate successors the activity reached the peak, the most numerous of the imitations belonging to their age.[44] This region included parts of Roman provinces and areas within the sphere of Roman economic influence,—even though the political relations might have been bitter on occasions : we should therefore expect the weights of the imitations to correspond to those of the originals. The expectation is not belied : the pieces are mostly copies of originals issued within a period of thirty years from 175–6 A.D. to 206 A.D., and the weights answer as closely as may be to the weights of the originals. Had the pieces been fashioned in India they are scarcely likely to have deviated from the heavier Kushan weight standard, which remained unchanged throughout the period we are concerned with.[45] The faithfulness with which the imitations reproduce the fluctuations in the weights of the originals points to a region in close touch with Rome as their birth-place in preference to another that could not have been amenable to Rome's economic power nor have responded sensitively to the rise and fall of her holdings in gold. The manufacture of imitations of foreign coins, even of indigenous issues, has not been a pastime popular in India. The Indian knew how difficult it is in the conditions obtaining in the country to introduce and maintain a currency system which would eliminate the balance and the touchstone, and so he was content with currencies which were not distinguished for technical perfection. He had therefore no motive for attempting imitations of the issues of foreign powers. The Indian has always been willing to manufacture coin-like pieces for use in jewels like necklaces, but he is anxious to make them broad and thin so that he make a little gold go a long way :[46] but the imitations we have of Roman coins are generally of the normal breadth and thickness and do not vary sensibly from the normal weight.

We are now in a position to throw some light on a few points which could not be elucidated earlier owing to our not having understood the phenomenon of debasement as it appears in the coins from Gumada and on the issues of the Western Kshatapa rulers.

The explanation of the occurrence of Greek characters on two coins of the Gumada hoard[47] is probably that the Latin letters on the Roman originals were mistaken for Greek characters as the debasement proceeded in a region where the Greek influence was predominant : had the imiatitons been fabricated elsewhere the Greek characters would not have intruded themselves.

The very hesitant speculation that the name Aurelian, with the Greek for 'emperor', may appear on one of these coins[48] in a legend incorporating some Greek characters[49] serves to exemplify the difficulties of having to rely on the vagaries that follow in the wake of debasement. The conjecture is open to the objections that there is no Aurelian among the emperors of the period to which the weight of the coin and the style of its types assign

it, and that even if we assume the name to be a corruption of that of Marcus Aurelius the bust which occurs on the coin enclosed by that legend does not portray the features of that emperor.

Among the combinations of letters that occur on these pieces are some which might, if we are willing to speculate, stand for corruptions of the name of Julius or Julianus.[50] Neither of the names appears on the Roman issues after about 41 A.D., except that in 193 A.D., the name Julianus appears on the coins of Didius Julianus I, who wore the imperial purple in that year. On the issues of the kings of the Cimmerian Bosphorus the names Julian and Julius appear on some brass coins issued between 49 and 124 A.D.[51] This circumstance suggests the query as to whether the legends on the pieces from Gumada were borrowed from the coins of Didius Julianus I or the issues of the kings of the Cimmerian Bosphorus, but the suggestion seems to be quite far fetched.

We have seen how it is difficult to derive the obverse legends on the silver coins of Rudradaman I and his successors, which appear to be predominantly Roman, from the obverse legends of Nahapana and Chashtana which, however, are in Greek.[52] The main difficulty was that while the post Chashtana legends are so debased that they seem to be a number of removes distant from the possible Roman original we could not point to legends definitely Roman that could be located at the intermediate stages in the debasement. Now that, however, it seems clear that the legends on the pieces from Gumada are debasements of Roman legends,—probably not excluding the two legends that betray a mixture of Greek,—and that they represent various stages in the debasement, short of that of the complete corruption witnessed to by the post-Chashtana legends, we may permit ourselves the supposition that it is not improbable that some pieces must actually have been in circulation bearing corruptions on them linking up the utterly corrupt post-Chashtana legends with a Roman original. The Gumada pieces are witnesses to the currency, almost contemporaneously with Rudradaman I, of coins bearing legends such as might have lain between the corrupt legend of that king and the Roman legend that should have been its proto-type. So, they speak also to a contact of India with a region in which Roman influence was fairly potent,—a region different from that from which Nahapana and Chashtana derived their Graeco-Roman legends. We do seem to have issues of Chashtana on which corruptions of Roman legends appear,[53] and similar legends appear also on issues of Jayadaman, son of Chashtana.[54] The legends have been taken to run in Greek,[55] but the characters do not seem to compel us to accept them for Greek in preference to Roman : their proto-types might more probably be Roman than Greek. If this is so, we have to accept that the coinage of western India under Chashtana and his son Jayadaman could have come also under Roman influences, though the legend on at least Chashatana's silver issues seems to be overwhelmingly Greek. This would warrant a suggestion that in the days of Chashtana and his son, and perhaps also in the days of Nahapana, who is generally taken to have preceded Chashtana, some coins were issued with Roman legends on one face and that it is as a result of the corruption of those legends that we have the wholly debased legends on the post-Chashtana silver issues : Rudradaman I would then seem to have inherited from his father and grand-father a corrupt Roman legend,—probably as corrupt as the debased Greek legends on Nahapana's issues,—which in his very first issues became completely debased. The Gumada coins illustrate the various stages in the process of debasement. On this hypothesis we are able to resolve the difficulty we have had to labour under,—of deriving the Roman-looking legend of Rudradaman I from the Greek-looking legend of Chashatana.[56] The Roman influence could not have filtered through the lands under the control of the Indo-Greek chieftains : it could have come only by way of the Asiatic countries to the west of Persia.

INFLUX OF THE COINS INTO INDIA.

Did the influx of Roman coins into India bear the character of a steady phenomenon or did it fluctuate from time to time in response to changes in circumstances ? On an examination of the finds of Roman coins made down to 1904, the conclusion was drawn that the finds pointed to 'five different periods in the connection of Rome with India', and that the characteristics of the five periods could be summed up thus :

'1. There was hardly any commerce between Rome and India during the Consulate.

2. With Augustus began an intercourse which, enabling the Roman to obtain oriental luxuries during the early days of the empire, culminated about the time of Nero, who died A.D. 68.

3. From this time forward the trade declined till the date of Caracalla (A.D. 217).
4. From the date of Caracalla it almost entirely ceased.
5. It revived again, though slightly, under the Byzantine emperors."[1]

This view has gained general acceptance, with some modifications,[2] but it requires to be subjected to review for at least the reason that a large number of finds has since come to light.

A more substantial reason may also be urged in favour of a review. The conclusion set out above was reached by splitting up each find into its components, and treating each component as evidence for its having reached India by itself ignoring the fact that each find is, *prima facie*, a complete entity and that the one date on which the find, complete as it was discovered, could, for a certainty, have been in circulation at the place where it was discovered is the date of the latest coin which it contains.

For instance, the Pakli find which comprises coins ranging over about two and a half centuries,—from the close of the 2nd century B.C., to the beginning of the 2nd century A.D.,[3]—has been cited as a piece of evidence having a bearing on the point whether there was any trade between Rome and India in the period of the Consulate.[4] If the consular coins of the find are to be taken to prove the subsistence of commercial relations with Pakli in the time of the Consulate, then, we must assume that the coins of the find came together in some manner such as this: the earliest coin of the find came to Pakli about 100 B.C., and at various intervals it was subsequently joined at Pakli by the other consular coins during the period of the consulate itself: all of them kept circulating at Pakli down to the first quarter of the 2nd century A.D., during which period they were augmented by the coins of Augustus and Tiberius, which reached Pakli, in dribblets, in their respective reigns: the batch so made up went on circulating for almost a century till a coin of Hadrian gained access to it and brought about its immurement in the soil of Pakli. Not only should the coins have flowed into Pakli in a steady stream thoroughout these two and a half centuries, but they should also have been so actively in circulation that they did not get consigned to the earth in hoards. Roman coins should then have been an integral part of the currency system of Pakli over the long period covered by the coins of the find. But, what evidence have we to support such a conclusion?[a]

Had Roman coins been coming in so steadily and been circulating so actively, we should have expected a much larger number of finds to have been made of them, at least in the vicinity of Pakli, than we have knowledge of. The scarcity of finds of the gold issues is often attributed to the Kushan kings, who then held sway in that region, having melted down the gold coins that flowed in and restruck them as their own issues. If this is a correct explanation, we should have no finds of Roman gold in the period lying between 78 A.D. and about 200 A.D.,—the period in which the Kushans emitted their gold in plenty. But, of three finds in that region, two cover that very period,[6] and the third comprises coins the earliest of which belongs to the close of the fourth century A.D.[7] The significance of this circumstance may be sought to be explained away by pointing to the fact that two of the three finds came from stupas,—the Roman coins in them having obviously been specially selected for deposit in those monuments,[8]—but the explanation fails to account for the occurrence of another find which was not a stupa deposit.[8] Further, we find a total absence of Roman coins in gold of the years prior to 78 A.D., and of the years subsequent to about 200 A.D.; this is a phenomenon for which an explanation has to be found other than that of the currency policy of the Kushan kings. The scarcity of finds of the silver issues in the same area is noteworthy, especially as the silver coins are not supposed to have been melted down for transformation into Indian currency. The significant finds of silver in that area are two in number, and both of them are deposits in stupas.[9] Had Roman silver been in circulation as part of the currency of India,—whether in the north or in the south,—Roman denarii should have occurred in respectable numbers in finds in the company of such indigenous silver currency as the punch-marked puranas but we know of no instances of such association. Even the Pakli find did not contain one coin of the local issues, in spite of its being a fairly large hoard and of its spanning a length of two centuries and a half. The Roman denarius has been found in four different finds in south India and in every one of the hoards not more than one denarius was found. Only one of the finds of silver coins was an insignificant batch of three coins[10] but the others were by no means small: it was a potful in one case;[11] the hoard was a large number in another;[12] the third was a collection of 770 coins;[13] still, none of these finds contained more than one denarius. Even the four denarii of the four hoards belong to the short period from about 29 B.C. to 37 A.C. It looks as if a few denarii trickled in and got lost in the large volume of punch-marked puranas that formed the bulk of the currency.

Another hypothesis that requires consideration is that the coins of the Pakli hoard had been in circulation elsewhere than in India till about the time of Hadrian, that the various Consular and Imperial coins had got mingled up before they reached India, that the batch reached India, constituted practically as in the find, and that after the coin of Hadrian had joined them, whether in India or beyond, they were paid out for Indian commodities, and that then the whole batch passed a hand or two, probably getting split up into lots in the process, and that one of such lots came to be committed to the earth at Pakli. If this is probable, the find is proof of commercial relations for a period not earlier than Hadrian's, and by no means for the days of the Consulate.

A third hypothesis may also be canvassed. It is possible to conceive of a process of accumulation that combines the two possibilities we have just examined: some of the coins might have come together into a batch in the countries to the west of India and then moved into India, and met and mingled with other coins which, having come in various dribblets into India, had been circulating in different localities till the vagaries of monetary circulation threw them together. This hypothesis is not, however, different in essentials from the first, for it assumes the possibility of at least a portion of the coins having been in active circulation in India and therefore of that portion having functioned as a part of the currency of the country. To the extent that the hypothesis depends on this assumption it is open to the same objections as the first.

We find therefore that only the first two of these hypotheses require examination. On the first view, the Pakli find speaks to commercial relations having subsisted between the two countries in the period of the Consulate and in that of the Empire under Augustus and Tiberius and to their having ceased for almost a century from Tiberius till they revived under Hadrian. On the second view, the find is not evidence for any period earlier than that of the latest of the coins in the find,—that is, for a period earlier than the reign of Hadrian.

An examination of other facts available to us is necessary if we are to determine the manner in which the hoards found in India came to be constituted; all the relevant evidence has to be carefully considered, before we shall be able to speak with confidence about the periods in which the coins of the various hoards came into the country.

EPISODES.

Three episodes in the history of Roman coinage help us to understand whether the Roman issues that reached India had tarried on the way within the limits in which the fiat of the Roman emperor could run with effect, and whether the hoard was ultimately made up within or beyond the emperor. Nero effected 'reforms' in the coinage, in 64 A.D., the two vital features of which were a reduction in the respective weights of the aureus[14] and the denarius and a substantial increase in the alloy mixed with the silver of the denarius.[15] Good and bad do not float together in the currency stream, and the bad pieces serve to precipitate the good ones to the bottom; so the old heavier coinage went steadily to the melting pot'.[16] Thus, 'Pre-Neronian gold and silver very rarely occur', in hoards, 'after the reform': though 'Republican denarii' are found included 'occasionally', yet 'the one exception consists in the legionary coinage of Mark Antony, which, by its very baseness escapes the melting pot, and occurs in hoards as late as the middle of the third century' A.D.[17] We may therefore take it that the presence of pre-Neronian gold and silver is fairly good evidence of the hoard having been formed in regions not subject to the authority of the emperor. Secondly, 'from about the second year of Domitian to the second year of Trajan'—that is, from 82 A.D. to 99 A.D.—'the old heavier aureus' on the Augustinian standard 'was again struck',[18] and the silver 'coins of Domitian and Nerva . . . seem to have represented an improvement on the Neronian standard'.[19] The natural consequences of this attempt at improving the coinage did not fail to follow: the better coins disappeared leaving the field clear for the inferior ones: 'the aurei of Domitian and Nerva' of the higher standard, 'are absent' from hoards,[20] and their silver issues 'are seldom found'.[21] So, again, the occurrence of these issues in a hoard is an excellent index to the region in which it was formed. Thirdly, 'Trajan, in 107 A.D., actually withdrew from circulation such Republican denarii as were still current';[22] so, the presence of Republican denarii in a hoard of a date later than this withdrawal is presumptive proof of the hoard having been brought together beyond reach of the emperor's strong arm.

Two hoards of aurei,—one at Karukkakurichi[23] and another at Madura,[24]—terminate in the period between Nero's reform and the starting of the issue of the heavier series under Domitian: all but three out of the 501 coins recovered at the former place and ten out of the eleven coins found at the latter are the heavier coins current before the reform of Nero. This is conclusive evidence of the coins of each of these two hoards having come together into a hoard when they had passed into an area where Gresham's Law could not operate. A few other hoards of aurei terminate with pieces belonging to dates later than 92 A.D., the last year in which the heavier issues of Domitian and Trajan were put into currency. The find at Kaliyamputtur[25] is one of the most important of these hoards, but full details of it are not available: none the less, it is obvious that a good percentage of the coins which it comprised was of the period that preceeded Nero's reform: this circumstance confirms the conclusion drawn in respect of the Karukkakurichi and the Madura finds. Out of the three aurei of the Gaiparti find,[26] one belongs to the days prior to Nero's reform, and none belongs to the decade in which Domitian's and Trajan's heavier issues were uttered. Almost four-fifths of the Nandyal hoard[27] fall in the former period and practically none in the latter. In the Vinukonda hoard[28] the earliest piece belongs to the former period and possibly one coin belongs to the latter period. Probably the major portion of the huge Kottayam[29] hoard was made up of issues belonging to the former period, and not one seems to have belonged to the latter. These hoards seem therefore to be compounded curiously: coins of the former of the two periods are present and coins of the latter of the periods are absent. This phenomenon calls for the formulation of two hypotheses. The coins of the former period should have all crossed the pale of the Roman empire before Nero initiated his reforms; for if they had continued in currency within the empire these heavier pieces would have gone to the melting pot when Nero's lighter pieces flowed from the mint. The coins of the latter period, being of the heavier standard, should have refused to float in the stream of lighter coins into which they were thrown, and should have gravitated, with more than the usual speed, to the crucibles of jewellers or the chests of misers. Confirmation of at least the second hypothesis is available: in none of the three hoards[30] which, beginning after Nero's reform, pass beyond the decade in which Domitian and Trajan emitted their heavier issues, do we find one coin of that decade. The only silver hoard that can offer any testimony is that of Pakli,[31] starting as it does about 124 B.C. and running down to 119–25 A.D., not only beyond Nero's lightening of the standard and beyond the attempt of Domitian and Trajan to improve the standard, but even beyond Trajan's attempt at weeding out the over-worn denarii of the Republic. This hoard contains the Republican issues in full strength and a few issues of Augustus and Tiberius, but none others of the empire down to Nero's reform, nor any of the period in which Domitian and Trajan sought to improve the standard.[32] Obviously, these coins of the republic and the early empire had crossed over into foreign territory before Nero effected his reforms.

The effects of the three episodes in the history of the coinage are manifest not only in the finds in the south but also in the finds in the north.[33]

When thus we examine how the Indian hoards were effected by the practice of paracharaxis or by the endeavours to alter weight standards or to call in worn out currency we are led to conclude that Roman issues had a tendency to go to the very edges of the empire and leap over the frontiers into regions which were sometimes so resentful against Rome as to exhibit their wrath by defacing the effigies which Roman emperors placed on their issues.

Defaced Coins.

Where those regions lay might to some extent be deduced from the range of the defaced coins in each hoard that contains them. From what we know of the hoards in which they occur,[34] we have to conclude that the period from 51 to 64 A.D. represents the close of the first paroxysm of paracharaxis,[35] the period from 75 to 79 A.D. the close of a second attack,[36] the year 118 of a third,[37] and,—if we may speak tentatively,—some year a little beyond 337 A.D. the termination of the last seizure.[38] On every such occasion,—we may take it,— the pieces then in that country would be defaced, but when the paraxysm passed, the coins that flowed in would be immune from being slashed at. Rome's main antagonisms in all these periods were in the east: Armenia and Parthia and the adjoining regions rose up in arms against Rome now and again. The first of the periods mentioned above, 51 to 64 A.D., corresponds to the first term of the activities of Vologases of Parthia (51 to 77 A.D.), who kept Rome active in the frontier: in 66 A.D. Nero came to an understanding with Tiridates by which he invested the latter with the diadem. The second of the periods, 75 to 79 A.D., which is yielded by the Karukkakurichi hoard,[39] represents the date of issue of one series of coins of Vespasian: if that series was actually issued, not down to 79 A.D., but only to 77 A.D., this hoard too would fall within the reign of Vologases, but if it was issued even in 79 A.D., we are not able to point to any antagonism to Rome as the provocation. Perhaps the hoard as we now have it is only a truncated portion of a larger one which included

pieces reaching to a date when there was recrudescenee of trouble with Rome : this suggestion is probabilized by the circumstance that even the latest of the coins in the find seem to have been in bad condition, 'having evidently been in circulation a long time before they were buried'.[40] Only the last of the six aurei found at Karivalamvandanallur[41] speaks to another paroxysm,—the third,—and that aureus was issued in 118 A.D.,—that is, in the year after that in which Hardrian, succeeding to Trajan, reversed the aggressive policy which Trajan had pursued in the east from 113 A.D. to his death in 117 A.D. Either Hadrian's pacification did not bear immediate fruit,—for, then, this coin would not exhibit a gash,—or the coin is a fragment of a batch which was defaced in the course of a later onset of resentment. Considering that this coin is somewhat worn and might therefore have well been in circulation for half a century after it was uttered,[42] we may take it that it was defaced in the period from 162 to 165 A.D. when next hostilities subsisted between Rome and Parthia, and that it was subsequently that it fell into the company of the other coins of the hoard. The last of the periods of antipathy affecting the coinage which has been tentatively ascribed to some year a little later than 337 A.D., is based on the fact of the Gumada hoard[43] terminating with a coin which might have been issued in 337 A.D. at the latest. But a closer examination of the composition of the hoard seems to warrant a revision of the tentative ascription. As the hoard falls into two distinct groups, there being a gap of almost a century,—from 211 A.D. to about 305 A.D.,—which goes altogether unrepresented by any coins, it is reasonable to assume that the hoard was formed by the merger of a batch which terminated with 211 A.D. with another that included the coin of about 305 A.D., and that therefore the earlier batch might have had, till the merger, a history different from that of the latter. The earlier batch consists of imitations of coins issued in 175–6 A.D.,[44] 180 A.D.,[45] 196–7 A.D.,[46] 202 A.D.,[47] 210–11 A.D.[48] and 211 A.D.[49] The antipathy culminating under Septimus Severus in the Parthian War of 197–9 A.D. might, at the first blush, appear to suggest that the first three of these pieces were defaced when that war was being waged, and the other three might similarly appear to have been defaced when the hostilities of 215–8 A.D. kept Caracalla in the east. All these pieces are, however, imitations, and we have no ground for assuming that they were fabricated as soon as the original were minted,—an assumption that would be forced on us if we impute the defacement to the wars of Septimus Severus and Caracalla. But we have already concluded, from a consideration of the weights of these pieces, that they were all fabricated before Caracalla's reduction of the weight standard in 215 A.D. could have affected the weights of pieces fashioned in imitation of the issues prior to that date.[50] In all probability, therefore, they were all defaced subsequently to 215 A.D : but the eastern campaign of Caracalla, 215–8 A.D., may be too early : so, in all probability, the period of chronic hostility that set in with the war of Alexander Severus against the newly risen Sassanids, 231–3 A.D., might have seen the defacement of all the pieces of the earlier batch. The coins of the later batch,[51] being imitations of issues from about 305 A.D. to 330 A.D., their defacement might have happened in the periods of the antagonisms represented by the hostilities that were waged intermittently in the fourth century,—from 335 to 358 A.D. under the immediate successors of Constantine the Great, in 363 A.D. under Julian and Jovian, and in 374 A.D. under Valens,—but not probably after 390 A.D when Theodosius the Great concluded a lasting peace.

The validity of this line of reasoning will stand vindicated if it turns out also that the undefaced batch of coins in each of these hoards was brought together in a period when there was no conflict inciting Rome's opponents to use the chisel.[52] The one undefaced coin in the Tondamanathan hoard[53] pertains to 16–21 A.D., years that fall within a long term of peace. The undefaced piece in the Madura[54] and the Karivalamvandanallur[55] hoards,—closing as they do with 81–4 A.D. and 95–6 A.D. respectively,—terminate in another term of peace. The pieces in the Gumada hoard[56] that have escaped the chisel close with 206 A.D.,— a year that falls in the fifteen years of peace that subsisted between the campaigns of Septimus Severus and Caracalla. In the Karukkakurichi hoard[57] the undefaced pieces close with 63–4 A.D.,—almost two years before Nero made peace with Tiridates,—but, as already pointed out,[58] all these pieces are very much worn, and so it is not unreasonable to take it that these are but a few of a larger batch which had escaped the process of defacement. Otherwise, we are faced with the paradox of the defaced batch terminating in a term of peace and the undefaced batch concluding in a season of war. The coin that comes last in the series of undefaced pieces in the Nandyal hoard[59] was issued in 145–61 A.D.,—just a year before Marcus Aurelius and Lucius Verus attacked the Parthian empire. Either the coin was issued nearer 145 A.D. than 161 A.D., or its transit through Parthia was so rapid that it escaped the chisel, though very narrowly : probably, the former is the better explanation. Thus, we find that in four of the hoards the tale told by the undefaced batches agrees with that told by the defaced ones, and that in the two other hoards the tales are not inconsistent.

Evidence of Later Times.

If the evidence of much later times could be cited by way of a parallel, attention may be drawn to the circumstances in which foreign coins came to be received in India from about the 14th century to the 18th century, A.D. During this period, there was no dearth, except occasionally, of coined money indigenous to the country and yet foreign coins kept pouring in, from Sweden, France, Spain, Portugal, Genoa, Venice, Poland, Hungary, Turkey, Egypt, Armenia and Persia[60] to redress the balance of trade, which was then heavily in favour of India. Considering the circumstances that when bargains were made 'for chequeens' at Tellicherry, 'they were understood to be Ibraims', [61] that 'when a parcel of Venetian ducats' was 'mixt with others, the whole' went 'by the name of Chequeens at Surat, but when they' were 'separated, one sort' was 'called Venetians and all the others, Gubbers, indifferently', [62] that 'the name "Veneseander" was even wide enough to cover Turkish coins, and the name "sequin" was applied indifferently to the gold coins of Venice and other countries', [63] we cannot doubt but that the numerous varieties of coins that flowed in had already got mixed up before they reached this country. The trade with India being of international importance throughout the centuries, all the world was engaged in it, but the merchants of every European country found merchandise, including Indian, in the ports and the marts on the way to India, and so they bartered their coins against goods at the numerous trading stations on the way. [64]Egypt, Arabia and Persia, with their ports teeming with goods of their own and with the goods that flowed into them from India and beyond, became the centres to which European merchants came and paid out their coins in return for oriental goods : thus did European, Egyptian, Arabian and Persian coins mingle together on the banks of the Nile and of the Euphrates, before they ultimately found their way all together to India to pay for the commodities that India sent westward.

The Roman trade with India was similar in that it was carried on through intermediaries like Greeks, Egyptians, Arabs and Persians, and at intermediate stations like the in-ports and the landmarks of Egypt, Arabia and Persia. Roman gold and silver might therefore have tarried for fairly long periods in those areas ; the probability is enhanced by the circumstance that those countries had no coinages of their own in gold for the most important of the periods with which we are concerned. We need not therefore be surprised if coins of various reigns circulated together in Arabia and Persia and if when they ultimately reached India in payment for Indian commodities they were found to belong to periods widely separated. The Indian finds should therefore be treated.

Scarcely ever would it have happened that a Roman merchant,—Roman by birth or Roman in allegiance,—setting out for the east went to the nearest Roman mint, weighed out his gold or silver, paid in the seignorage, asked for and obtained his quota of aurei or denarii specially struck for him, and straightaway boarded his ship ; he is much more likely to have made up his holding from out of the mass of coins then in circulation in his neighbourhood. A hoard so brought together is not unlikely to have comprised issues ranging over a century and more in time.

A long range is not unknown in hoards that were buried before the death of Augustus : hoards of issues of about a century and three quarters were not uncommon ; [65]one find covers even a length of almost two centuries and a half.[66] An equally long period is covered by the coins, 'mainly of denarii', that comprise a hoard which terminates early under Vespasian.[67] 'The finds of gold' of the first three centuries of the empire 'often cover considerable periods of time'. [68]If the Indian hoards testified to a range markedly different we shall have cause to investigate whether there were special circumstances to account for the difference. Of the Indian hoards of gold that stop practically with 200 A.D., the Nandyal find covers 169 years, [69]that of Vinukonda extends over 197 years,[70] and one of the Kottayam finds runs over a space of 246 years.[71] The only hoard that spans the third century A.D. covers 155 years, [72]while the range of three hoards that run through the fifth century A.D. cannot be longer than a century, and may even be appreciably shorter.[73] Hoards of silver are generally of very much shorter range, probably because the influx seems to have practically stopped with 55, A.D. The Pakli hoard, [74]spanning the two centuries and a half ending with the first quarter of the 2nd century A.D. is unique for length ; the hoard with the next longest range is one of the Vellalur finds, which runs over 70 years.[75] The only hoard of copper we know of covers a little over two centuries.[76] The persistence with which the coins continued to keep themselves afloat does not therefore seem to have varied according to longitude. Had the Roman merchant filled his bag with the gold coins obtained from the money-changers of Rome or of one or other of the Roman provinces the contents of the bag would not have had a composition different from that of an Indian hoard.

But, is it probable that the batches of Roman coins that entered India did not meet batches in India that had come earlier and that they did not mingle together in the hands of merchants or of hoarders on Indian soil ? Are batches of Roman coins likely to have reached spots so far in the interior as Coimbatore, Nandyal, Dharphal or Gaiparti, just as they had entered the outskirts of the land, without receiving accessions from batches that had already reached the country ?

When foreign coins are allowed entry into the country without restriction they are accepted only as bullion cut into pieces of convenient weight, and they have no vogue as coinage backed by the prestige of an authority which undertakes some manner of responsibility for ensuing that the coinage satisfies the rudiments of a system of currency. So long as they are made of the precious, or of the semi-precious, metals, they are not ineligible as the medium for payments, as their intrinsic value gives them purchasing power, but, as money they are not so convenient as the native issues, for they are unfamiliar to the people in general and they lack the backing of local potentates or influences. While they become acceptable by way of barter, they do not easily run current as money. The occurrence of defaced aurei in the Indian hoards is enough to show that the foreign pieces were accepted, not as coins, but as small bits of good gold conveniently clipped to a uniform weight. While the native pieces, because of the familiarity which they enjoyed on account of being the currency of the country and of the prestige which they commanded on account of their having been issued by authorities or entities that the people knew at first hand, would have run current without let or hindrance, the foreign aurei and denarii had no such adventitious aids to popular acceptance and should have had to rely only on their prepossessing appearance and their solid worth for getting into vogue. They should have passed current only because they were ascertained to contain a definite quantity of gold or silver and to be of a certain grade of purity. True it is that they were of good looks and that they justified themselves when their substance was put to the test, but they could win their way only when they had dispelled the doubts due to their being unfamiliar and established a prestige commensurate to the excellence of their qualities. In no event could their circulation in the country have matched either the rapidity or the volume of the native currency. Further, it is idle to expect them to have become known at any but a few centres or except along a few routes which had some connection with the commodities for which they came to pay.

Nor do we know of any reason why Roman coins on their entry into the country should have assumed, or been put to, the work of the regular currency of the land. Entering the country at a seaport or at an outpost along a land-frontier they would pass hands in payment for such goods as might be lying in the warehouses against the arrival of the ships across the seas with their freight of foreign gold or silver. If the ports or the outposts were not themselves market cities, they would, then, travel to the 'emporia' lying inland, of which Ptolemy makes prominent mention. There they would pass into the hands of the great merchants of the land engaged in bringing the produce of the land to market. If these merchants had found that the foreign pieces were acceptable to the minor merchants or the major producers further inland, the pieces would resume their travels, ensconced in the pouches of the agents whom the merchants of the emporia would be remitting in various directions to bring together the commodities in expectation of which the foreign coins were flowing in. They would not tarry in the market-cities beyond a few months : they would start moving during the next purchasing season. Thus, passed on by merchants from cities to towns and thence to villages, from season to season, the coins would reach the hands of the merchant in the villages engaged in cornering all the produce or of the landlords whose estates are the largest. Here they would stop, and refuse to go further and get into poorer hands, for even the small silver pieces had in those days greater purchasing power than modern coins approximating to them in weight, and the gold coins, weighing, as each did, almost as much as a modern British sovereign, were certainly not designed to pay for petty purchases. Some of the pieces may at each of these stages be melted down, for jewellery, or for industrial purposes, such as gilding. Again, some of them may change hands, as commodity, at each of these stages, for the merchant at seaport or in the market-town would pay them out by weight for the commodities he would be purchasing. But at no stage would each batch get frittered away completely as the indigenous currency is liable to. A tendency to split must be granted, but the tendency to get scattered may with equal confidence be denied. Hence it is that these foreign coins occur in respectable numbers in the finds in this country and yet are not found in the huge numbers in which the coins of the country turn up.

Coming in as these coins do to pay for purchases and passing as they do through the hands of merchants eager for turn-over, these coins are not likely to tarry perceptibly on the way from the port to the inland village. Probably they moved in spasms, due to the intermittent activities of trade-winds and monsoons and the periodicity of nature's production of seasonal products like pepper, cloves, cardamoms and cotton,—the exports to Rome. Knowing also as we do that the batches that entered this country did not include pieces that were below par, either in quality or in weight, the lots into which each batch should have got split in passing hands cannot but be fairly representative of the composition of the batch when it entered the country, there having been no reason for preferring any one of the issues to any other.

Such hoards as are found consigned to the soil may, therefore, be taken to represent substantial portions of the respective batches in which they came into the country and to comprise representative selections of the issues that occurred in the various batches, and to have ceased to migrate further within a season or two of their entering the country.

The finds, therefore, cannot be relied on implicitly for determining the chronology of the mercantile relations between Rome and India unless we are able to decide the extent to which the finds reflect the composition of the batches of coins that entered India from time to time.

Coins found singly might be of some little use in determining the periods in which commercial relations could have been active: their testimony is not confused by the voices of associates. But, unfortunately the evidence of such finds has not been accurately recorded in many cases. In two finds the coins were 'picked up';[77] in a third, the coin was 'found';[78] in a fourth the coin was 'a stray find'[79]: in all these cases there might have been other coins lying about which, however, might have escaped notice. Of another coin nothing more is recorded than that it was of gold.[80] These finds are, therefore, unilluminating. One of the finds is of an aureus of Lucius Verus issued in 166–7 A.D.,[81] another is of an aureus issued between 202 and 210 A.D. jointly in the names of Septimus Severus, Caracalla and Geta;[82] a third is of a copper piece issued from Alexandria in 283–4 A.D. by Carinus;[83] and a fourth is of a solidus issued between 378 and 450 A.D. by one of the first two Theodosiuses.[84]

There are some other finds in each of which one Roman coin has been found mixed up with indigenous coins. In each of two of these finds a denarius of Augustus, datable between 29 B.C. and 14 A.D., occurred along with the ancient Indian coins known as puranas of the punch-marked class:[85] in a third, it was a denarius of Tiberius, assignable to the period between 26 and 37 A.D. that occurred with that same species of coins.[86] A denarius of Augustus datable between 2 B.C. and 11 A.D. occurred in another find along with a small coin of lead and another small coin of potin, neither of which bore legends or symbols that could help to date them.[87] A denarius of Tiberius issued between 16 and 21 A.D. was discovered along with a coin of Azilises, who might be dated about 25 B.C.[88] Thus, we find that single Roman coins of silver, attributable to the period between 29 B.C. and 37 A.D. have been found, mixed with indigenous coins, in areas so far apart as Taxila, Mambalam, Chandravalli and Coimbatore.

To sum up, then, the evidence of the coins found singly: the denarius occurs between 29 B.C. and 37 A.D.; the aureus occurs in 166–7 A.D. and 202–10 A.D.; a copper piece in 283–4 A.D.; the solidus between 378 and 450 A.D.[89]

Let us now turn to a study of the finds in which more than one Roman coin occurs.

Of these, we may expect those finds in which Roman coins appear along with indigenous issues to be helpful in solving our problem.

One find of coins,—made at Manikyala,[90]—comprised Roman denarii of the period from about 90 to 41 B.C. and was found to include coins of the Kushan kings Kadphises I, Kadphises II and Kanishka:[91] though the dates of these kings are not conclusively determined we may take it that these coins range from about 45 to 123 A.D.; we need not therefore be surprised if the denarii are reported to have been 'worn as if they had been a long time in circulation.[92] The Kushans did not coin in silver, probably because 'the extensive coinages of silver money by the Greek kings were found sufficient for the wants of the people',[93] and the silver issues of 'the Saka Scythians must have continued current'.[94] If, therefore, the entry of the Manikyala denarii into India was about 41 B.C., then, it is likely that a silver coin or two of the Indo-Greeks would have insinuated itself into that set of seven coins more easily than if the entry had been about 123 A.D. In a find in south India consisting of two denarii, the later of the coins was of 39 B.C.; the two coins went into the earth within a few years.[95] It may be that the denarii of Manikyala formed members of a lot that flowed in about 123 A.D., and that they were picked out for inclusion in a stupa-deposit as being those that showed the least traces of the features of potentates or monarches other than Kushan.

Six aurei ranging from 31 B.C. to 54 A.D. in date were found together in south India together with a batch of punch-marked puranas,[96] the date of which, however, is uncertain. All the aurei being defaced with a cut on the obverse, it is likely that they all formed a lot when they were so defaced, or, in the alternative, that no fresh coins intruded themselves into the lot after the coins had been defaced : either way, the composition of the find testifies to the absence of a tendency towards intrusion.

Three aurei, assignable to the period from 90 to 138 A.D.[97] were found with a series of seventeen Kushan coins of the reigns of Kadhises II, Kanishka and Huvishka,[98] which, together, cover the period from about 45 A.D. to about 140 A.D. Considering that the distance in time, between 90 and 138 A.D., covered by the aurei is too short to make it either necessary or desirable to assume that they came one by one into the group, and considering also that the terminal dates of the batch of the aurei and of the batch of the Kushan coins are so very close as 138 and 140 A.D., it would seem that the three aurei entered the country in one bunch.

Other finds, however, are of no help. An aureus of about 186–9 A.D. and a gold imitation of a brass coin of about 197 A.D. were found[99] along with some Kushan coins of Kanishka and Huvishka (78–140 P.D.), and a gold coin of probably Chandragupta II.[1] Such little utility as these associations may have for us is lost by the circumstances that the report of the find says that all the coins were 'discovered' in 'a subterranean treasury':[2] for aught we know they were not live currency but dead antiques in the hands of whosoever committed them to the treasury. Five solidi covering a range of almost a century, from 378 to 474 A.D., were discovered[3] along with imitations of Indo-Scythian coins of the sixth century A.D., and with a large number of Sassanian coins of various reigns. Nothing more precise being known of the oriental coins in the find, the combination of Roman and oriental issues proves unhelpful. A solidus of Zeno (474–91 A.D.) is said to have been found 'in company with three or four of the pagodas called Animitti',[4] but, as the pagodas of that name are of a much later date, it is impossible to believe that solidus and pagoda formed part of the same hoard, unless it be that the pagoda called the 'Animitti' was really a pagoda of earlier times : it may well be that two hoards of different dates had got mingled together.

Thus, of the six finds we have examined, the three latter are unilluminating, but the three former establish that it is more probable that the Roman coins in those finds entered the country, *in each case, in practically the combinations in which they were discovered* than that, they entering at different dates, they circulated about and then came together, just before they found immurement in the soil.

That it is not likely that we may be mistaken in this conclusion seems to be shown by the coins of *some ten emperors who practically succeeded one to the other in the century* from 238 to 337 A.D. having occurred together in a find in Upper India.[5] It is not only improbable that these coins came separately into the country, but that they also subsequently came together into a complete set : the chances of these happenings are infinitesimal.

The problem may be looked at from another angle,—*the intervals of time by which* the constituents of the finds are spaced. A find covering a short length of time and comprising a series of coins falling in close sequence has a greater chance of having been brought together in India itself than a find which runs over a long period and contains issues distantly spaced. The reason is obvious : coins of different reigns are likely to run current simultaneously in the country of their origin and in the areas near by ; but, if they pass to a distant land where they do not become part of the accepted currency there is little chance of their surviving in circulation in that country and less chance of issues widely separated in dates ultimately coming together into a hoard the constituents of which are not distinctly spaced.

The Pakli find,[7] for instance, testifies to a gap of at least 82 years between the penultimate and the last of the coins in it. Is it probable that the penultimate coin kept float in India for 82 years till it was joined by the last coin ? Even if this is natural, what an odd chance must it be that sent the last coin to just that person who had another Roman coin in his purse !

The Karukkakurichi (Pudukkottah) find,[6] which is said to have been 'secured very nearly if not altogether intact', comprised as many as 501 coins, all of them falling within a period of about a century and fairly distributed over the years, appears to furnish an excellent illustration of this phenomenon. A merchant coming straight from Rome or Arabia or across Parthia is bound to have brought with him coins placed so close together in time, and, if he chose to make a purchase at Karukkakurichi and pay for it with gold on the spot, the lot which he should have parted with could not have been different from the find as we have it. Each of the two Vellalur finds of silver, covering the period from about 10 B.C. to 55 A.D., comprises a series of issues the spacing of which is fairly even.[8] The silver coins that turned up at Yaswantpur, covering practically the same period, exhibits the same characterestic ;[9] so too does the Kattanganni find of silver, the range of which is from 2 B.C. to 38 A.D.[10] But, the find at Vinukonda,[11] comprising as it did coins so few, comparatively, as fifteen, spread over a range of about two centuries, exhibits a gap of about fifty years between the earliest two of its components.

If this line of argument is sound, then, the finds would fall into two categories,—those in which the coins entered the country practically in the combination in which they were subsequently exhumed, and those in respect of which it cannot for the moment be stated definitely whether the composition of the find at the time when it came to light was due to the mingling of more than one batch already current in the country. To the former class may be assigned the finds at Gaiparti,[12] Kottayam,[14] Mallayapalaiyam,[14] Ongole Taluk,[15] and Upparipeta.[16] To the latter seem to belong finds such as those at Dharphul,[17] Gumada,[18] Hidda,[19] and Madura.[20]

The ambiguity of this conclusion in regard to the finds of the second category would seem, however, to be resolvable in some degree if we take note of an interesting feature present in some of them. A good proportion of the aurei in some of the finds is deliberately defaced,—the coins being marked with a clean chisel-cut severing the head on the obverse vertically in two.

Having regard to the conclusions we have already arrived at in regard to the region where defacement was practised, the presence of a cut on a Roman coin would seem to be *prima facie* proof of the coin having, at some time in its career, passed through a land which deemed it incumbent, in assertion of its self-respect, to place on the coin its mark of high displeasure with Rome's forward policy. Had the coin been melted down or been melted and restruck in lands hostile to Rome, the displeasure would have gone without palpable and enduring testimony : defacement should therefore have been deemed the one method of dealing with the intrusive gold of Rome which would give a fitting reply to the pretentions of Rome to suzerainty over all the world.

The Tondamanatham find of six aurei,[21] all defaced, should thus appear to be the clearest example of a hoard formed wholly beyond India : the absence of even one specimen that does not carry a cut makes it obvious that in the journey to India the batch did not receive additions *en route*.

The Karukkakurichi (Pudukkottah) find[22] is however the one that is most significant from this point of view. Consisting though it does of 501 pieces, the earliest as well as the latest of the pieces in it is defaced, and almost every type of the coins lying between has suffered defacement. In the case of many of the types, every one of the coins belonging to the type has been cut at, even though the coins number as many as a dozen[23] or fourteen.[24]. One type was represented by 161 specimens, and all of them except 15 bore cuts[25] ; of the 12 specimens of another type, no more than one coin was free from a cut[26] ; of the ten specimens of yet another type, only one was not defaced[27]. These features make it plain that the find falls into atleast two distinct sections : one section consisting of the defaced coins, and the other of the undefaced ones. The coins of the former category range from 29 B.C. to 79 A.D., while those of the latter run from 16 A.D.[28] to 64 A.D.[29] A hoard that divides into two such well-marked sections is very probably the result of the mingling of two distinct hoards. There is little reason to doubt that the batch of defaced specimens suffered that fate in a land other than India. The undefaced coins, however, form a batch which is very similar to the other in the homogeneity of its contents. No testimony speaks to Roman coins having been circulating in India as a part of the accepted currency of the land ; the undefaced batch cannot therefore be assumed to have been current in India till it fell in with the defaced batch. Both the batches cover practically the same chronological limits The probabilities are thus heavily in favour of the two sections of the board having come together outside of India, and not in the vicinity of Karukkakurichi. An analogy will be found in conditions some centuries later, when the issues of various western nations mingled together in Egypt, Arabia and Persia, and then flowed in a steady stream into India.

The case of the Nandyal find is equally interesting[30]. The defaced specimens range from 8 B.C. to 64 A.D., and out of the 24 types falling within the period, there are only five types, the specimens of which have not been defaced. The undefaced specimens run from 16 to 161 A.D. ; no coin between 64 and 161 A.D. bears a cut. It may well be that the coins down to 64 A.D., cut and uncut, came together beyond India where they kept circulating till they were joined by the later coins and that till then they had not crossed over to India.

Some of the coins of the Nellore find are said to have been 'much defaced' [31] : probably the defacing was by cuts at the head occurring as type. Seven of the eleven aurei of a find at Madura, including the one that stands penultimate chronologically, bears 'slight' cuts 'across the emperor's head'[32]. A few of the Gumada find are mutilated by vigorous cuts[33]. The latest of the aurei of the Karivalamvandanallur find has the face scratched with a chisel[34]. These finds too would thus seem to have got immured in the soil much as they arrived in the country.

The evidence that has been thus passed in review seems to establish, as clearly as the circumstances permit, that the batches of Roman coins that entered India did not practically circulate as the internal currency of the country, and that if a batch got divided in the transit from hand to hand the resulting groups reflected with fair accuracy the composition of the original batch, and that therefore the composition of each of the finds we now come upon may be taken to be a reasonably accurate index to the composition of the corresponding hoards when they entered the country. The evidence establishes further that the coins did not enter India before they had circulated for some time in the heart of the Roman Empire, and then in such outlying regions as Arabia or Persia, that in the course of such circulation the specimens of various issues came together, that often the issues of two or three centuries kept circulating together and that it is only after there had been thorough mingling that batches of them entered India.

The sorting out of the coins of these batches according to the reigns of the emperors represented in them serves no historical purpose : the coins did not flow into the country in a continuous stream and in chronological order : they came in as dictated by the needs of commerce, and in batches compounded of the issues of a number of emperors. The date of the entry of a batch into India may therefore be roughly taken to be the date of the latest coin in it.

Issues of Tiberius.

For an apt illustration of the fallacy of the reasoning to the contrary we need only turn to the facts relating to the occurrence of the coins of Tiberius in Indian finds. 'Coins of Tiberius', it has been pointed out, 'are extraordinarily numerous, sometimes predominating over those of other reigns in single hoards, and they include both gold and silver'[35]. It has also been added that 'the total number of coins of Tiberius found in the south and west of India is 1007 as against 453 of Augustus'[36] and that 'in all they come to more than half the total number of identified Roman coins found in south India'[37]. From this abundance of the coins of Tiberius and from 'the comparative scarcity of coins struck under Gaius and Claudius', it has been argued that 'remonstrances of Tiberius' against the increase of the Indian trade 'took effect'[38]. But the finds tell a different tale. Six hoards seem to close with the reign of Tiberius[39] ; comprising as they do no fewer than 277 coins in the aggregate[40] they can scarcely be cited in support of the theory that the emperor's wishes were receiving respect. It must be remembered, however, that it is only apparently that these six finds close with 37 A D The pieces that seem to give us that date are those well known as representing Livia as Pax[41], but these pieces fall into three varieties, the first of them issued from about 16 to 21 A.D.[42], and the second between about 21 and 35 A.D.[43], but the third variety seems to have been issued from 16 to 37 A.D [44],—that is, practically throughout the reign. The records we have of the six finds being inadequate to help us to decide whether the finds were constituted of one or other of the varieties or of a combination of them, we have had to assume that all the finds cover the whole of the reign of Tiberius. But one or other of the finds might really have been composed of the earlier issues : there might then, have been a cessation of the flow of silver while Tiberius was still on the throne.[45] If this was so, his remonstrances could not have had enough time in which to set to work indeed, the cessation might really have been due to causes more potent than imperial displeasure. Two finds close in the reign of Claudius [46]; the coins of Tiberius number only 78, and might be said to indicate that the remonstrance was taking belated effect But, we have two finds from one place, terminating in the initial years of Nero, which, together, contain as many as 707 specimens of the issues of Tiberius[47]. Are we, therefore, to postulate a swift and complete reversal of the policy of Tiberius.

Apart from the fallacy in the argument based on the abundance of the coins of Tiberius, the *facts do not present* themselves in the light in which they are made to appear. The abundance of the issues of Tiberius has been deemed to be a specially Indian phenomenon, and so a theory has been evolved to account for it. But the same abundance is noticeable in European finds : indeed, even the various occur in the same proportions in India and in Europe. The issue bearing *on the reverse the figure of Liria* as Pax and the legend 'Pontif Maxim, is as well represented in European finds as it is in Indian. for instance, the Cherbourg find 'contained about 200 aurei', a very large percentage of which were of the "Pontif Maxim." type of Tiberius,' and the find of Briatoco 'contained some 1,000 aurei' of which 'over 600 were of Tiberius, of the "Pontif Maxim," reverse.'

The finds that have turned up in this country are therefore to be deemed to testify to the facts of commercial intercourse shortly after the dates of the latest coins in them, and cannot be treated as evidence for earlier periods, though issues of such periods might occur in them in plenty.

Terminal Dates of Hoards.

Let us therefore turn to a study of the finds, paying due attention to their terminal dates. The data are set out in the accompanying table showing the terminal limits of the finds of hoards in the country.

Terminal Limits of Finds of Hoards.

Hoards of silver are enclosed within square brackets [ ]; those of copper in round brackets ( ). Hoards containing imitations are placed within strokes.

Emperors.		Terminal dates.	Regions and Find-Places.						
			Afghanistan.	A	B	C	D	E	F
B.C.		B.C.							
	..	41	..	[Mka]	..	..	..	..	..
	..	39	..	..	..	..	..	..	[Kl]
A.D. 27–14	Augustus	..	..	..	..	..	..	..	..
A.D.		A.D.							
14–37	Tiberius	..	..	..	..	..	..	..	..
	Do.	37	..	..	..	..	..	[Kt, Vi] Sa	[Krc] Kg [Ky, Po]
37–41	Caligula	..	..	..	..	..	..	..	..
41–54	Claudius	..	..	..	..	..	..	..	..
	Do.	47	..	..	..	..	..	..	[Ya]
	Do.	52	..	..	..	..	..	..	Kra
	Do.	54	..	..	..	..	..	..	To
54–68	Nero	..	..	..	..	..	..	..	..
	Do.	55	..	..	..	..	..	..	[Vea, b]
69–79	Vespasian	..	..	..	..	..	..	..	..
	Do.	79	..	..	..	..	..	..	Kk
79–81	Titus	..	..	..	..	..	..	..	..
81–96	Domitian	..	..	..	..	..	..	..	..
	Do.	82	..	..	..	..	..	..	Mdb
96–98	Nerva	..	..	..	..	..	..	..	..
	Do.	97	..	..	..	..	..	..	Kp
98–117	Trajan	..	..	..	..	..	..	..	..
117–138	Hadrian	118	..	..	..	..	..	..	Kv
	Do.	125	..	[Pa]	..	..	..	..	..
	Do.	128	..	..	..	..	..	OnT	..
	Do.	138	Ja	..	..	..	..	..	..
138–161	Antoninus Pius	..	..	..	..	..	..	..	..
	Do.	144	..	..	..	..	..	Ga	..
	Do.	159	..	Mkb	..	..	..	..	..
	Do.	161	..	..	..	..	..	Na, Ml	Ne
161–180	Marcus Aurelius	..	..	..	..	..	..	..	..
177/180–192	Commodus	..	..	..	..	..	..	..	..
193–211	Septimius Severns.	..	..	..	..	..	..	..	..
198/211–217	Caracalla	211	..	..	..	..	..	(Up)	..
209–212	Geta	212	..	..	..	..	..	Dh	..
	Caracalla	213	..	..	..	..	..	Vk	..
	Do.	215	..	..	..	..	..	..	Koa
305/311–337	Constantine the Great.	..	..	..	..	..	..	..	..
	Do.	330	..	..	..	..	..	(Gu)	..
378–95	Theodosius I	395 or	..		(UTb)		..	..	..
408–50	Do. II	450							
457–74	Leo I	474	Hi	—	..	..	..	..	..
491–58	Anastasius	518	..	..	..	..	..	..	(Ma)
518–27	Justinus I	527	—	..	—	—	—	—	Pu

If the conclusion reached above that Roman coins did not circulate in the country as money is correct, the date of issue of the latest coin in a hoard is the earliest limit for the entry into the country of the batch of coins making up the hoard. The latest date, however, cannot be determined except roughly on a consideration of the extent to which the latest coins in the batch show signs of wear.

Such data as are available in respect of the wear of coins found in hoards point to conclusions which, though approximate, do yet seem to be reliable. A find of a large number of aurei at Bosco Reale near Naples contained aurei of Augustus which were 'very much worn'[50], while 'its burial must be connected directly with the great eruption of Vesuvius in 79 A.D.[51] : evidently, aurei become very worn in a century. The earliest coins in another find near Naples were issues of Augustus, which were 'very much worn', but we do not know the condition of the latest coin in the find, which belonged to 88, 89 A.D.[52] : a period of a century and a decade is roughly indicated by this find as the term in which aurei could become worn to the same degree as in the Bosco Reale hoard. In a find at Corbridge, in England, the earliest aureus, which showed 'considerable signs of wear', was about ninety years earlier than the latest aureus in it, the condition of which, however, is not known[53].

In the Nandyal find[58] of aurei which comprises coins covering a range of about 170 years, the latest coin is somewhat fresh, while the earliest is worn exceedingly. Allowing a period of twenty years for a coin fresh from the mint to lose its freshness and become liable to be classed as but somewhat fresh, the Nandyal find may be said to be composed of coins the earliest of which had been 190 years in circulation before finding immurement in the soil. The earliest aureus in one of the Madura finds[58] is somewhat worn, and is forty years earlier than the latest, which is very fresh.

We have no reliable data in regard to denarii. In the Pakli hoard[54], which comprises issues of almost two and a half centuries, the earliest coins, which must naturally have been exceedingly worn, were not, however too worn to be incapable of being identified. The earlier of the denarii in one of the Manikyala hoards[55], attributable to 85 B.C., were so worn that they could only be identified with difficulty[56], but the Roman pieces were found in the company of Kushan coins of which the latest, in the present state of our knowledge may be as late as 123 A.D.[57] ; so, this find seems to suggest that denarii became extremely worn out in a little over two centuries. If we may rely on the evidence of these two finds it looks as if the rate of wear of denarii did not differ substantially from that of aurei.

If we may generalise on these data, we may conclude that an aureus or a dearius becomes somewhat worn in half a century, very worn in a century, and exceedingly so in a century and three quarters[59].

The criteria available for determining the periods in which the various Roman coins found in this country made their advent are those furnished by the several hoards discovered as treasure trove. They furnish details about the composition of the batches that entered the country and the condition of the respective pieces. The coins found singly or as flotsam are of no help as they, by themselves have no evidentiary value. Such stray pieces happen to occur in treasure trove, but only when originally they had got dropped casually[60] or had been specially selected[61], or had got lost in a mass of other varieties of coins[62]. Or, they occur on the surface, having probably been dropped when hoards were being removed from the earth[63], or they make their appearance as waifs in the masses of base-metal that, shovelled out from some out of the way corner of the country, are surreptitiously passed on till they reach the dealers in metal scrap in the larger towns. Their provenance is unascertainable, the routes they had taken are untraceable, their companions in their various journeys are unknown, and the period in which they found immurement in the soil is indeterminable. We may therefore pass on to a study of the hoards with a view to deducing from them the periods in which they should have come into the country.

We have already seen that the coins that entered India, whether landwise or seawise, are not likely to have been more than one or two seasons on the way from the outposts to the sources of such commodities as were in request at these outposts : a term of five years may therefore be allowed as being ample for the journey of the batches of coins from outpost to source. Once the batches pass into the pouches of the respective producers of the goods, we have no means of determining the length of time through which they would have reposed in the pouches till an occasion arose for consigning them to the safe-keeping of the earth. But the dates of their immurement are of no great interest to us, for once they are clipped of the faculty of migration, they cease to introduce further factors that would tend to obliterate or confuse such traces as we have of their history.

The hoard which, to all appearances, is the first to reach the country is that of silver unearthed at Manikyala.[64] The coins were all badly worn: four of them, assignable to about 90 B.C., and to about 41 B.C.,[65] were identified with some difficulty, and three, assignable to about 85 B.C. and to about 41 B.C.,[66] could not be identified except with considerable difficulty. If we allow about a century and a half for these coins to wander about and become so worn, we may assign their immurement in the Manikyala stupa to about 100 A.D., —a conclusion that is not inconsistent with the circumstance of the latest of their companions being copper issues of Kanishka, whose reign is generally taken to close with 123 A.D.[67] It may be that if the batch from which these pieces were selected for being deposited in the stupa contained later issues they were eliminated during the selection, or it may be that having started from Mark Antony's camp in Asia Minor on the journey east about 41 B.C., the date of the latest coin in the hoard,—it passed so far beyond the Roman frontiers that it did not fall in with later issues. If it was placed in the stupa about 100 A.D., we may assume that it entered the country about 95 A.D.

The Kallakinar batch of two denarii,[68] the latter of which is assignable to about 39 B.C., is exceedingly worn, though the earlier one, issued about 58 B.C., is not worn so badly. So, the two may have entered India about 115 A.D. and ceased to circulate about 120 A.D. Probably the batch started east in consequence of the spurt in trade that must have been occasioned by the Concordat of Misenum which the triumvirs entered into in 39 B.C.

The hoards that have the appearance of having entered India next are the seven finds which terminate with the reign of Tiberius.[69] The pecularity of five[70] out of these seven finds is that they are composed of only two issues,—that of Augustus in honour of his two grandsons and that of Tiberius presenting Livia as Pax,—covering a maximum range of thirty-nine years: the sixth find[71] is composed only of the latter of the issues and spans a maximum range of twenty-two years: we know nothing of the composition of the seventh hoard.[72]

These two issues having been emitted not only in very large numbers but also within quite a short compass of time it is but natural that coins of these two varieties should be found together and in large hoards and that specimens of other issues should not be included. If coins good and true and fresh from the mint were available in large numbers for merchants to send away to foreign markets there is little reason why their remittances should have included coins that were neither so fresh nor so easily available. To seek to explain facts so simple by a hypothesis of 'a systematic exportation to India of coin in bulk to become the basis of exchange there',[73] paraphrased into 'a deliberate exportation of Roman coin to India in order to assist Roman trade',[74] and '[a] deliberate exportation of Roman money to create a Roman currency there',[75] and by a further hypothesis of 'a natural trust placed by the uncultured Indian in the good Roman coinage of that age',[76] is to go wholly beyond the facts. The phenomena observed in India being far from abnormal, there is no need to explain them in terms of the abnormal,—a difference in levels of culture, a deliberation and a system in determining the vogue of currency, a policy of subsidising trade to far-away lands and a far-reaching plan to implant Roman currency in those regions to facilitate that trade. In the absence of more definite information about the composition of these finds it is hazardous to base any definite conclusions. The two pieces from Vidiyadurrapuram having probably slipped in through the interestices in the stone-flagging of chaitya, we have to assume that they dropped out of a larger batch, and yet we have no knowledge of what other coins had accompanied them to the chaitya;[77] the coins of the Karur find that were examined were only about a hundred out of the aggregate of about five hundred found in the pot;[78] we do not know how many coins were found in the Kangayam hoard and whether all of them had been examined;[79] only six denarii out of a find of a potful at Pollachi were examined.[80] It is only in respect of the composition of the Kotpad[81] and the Kattanganni hoards that we have reliable information. We cannot therefore be certain that the coins which we know to have occurred in these finds were not accompanied by specimens of later issues, and this uncertainty makes it difficult for us to reach any definite conclusions in regard to the terminal dates of these finds.

But we have some slight data about three of the finds which may give us an inkling of the truth.

Theoretically, the extent of wear of any one coin in a hoard is a correct index to the lease of life of the hoard. Where an early issue continues in circulation till it is joined or deserted by a late issue, the former is much worn while the latter is quite fresh, and if the two continue in circulation the former will grow quite worn while the wear of the latter will be slight.[83]

It appears that the six coins which were examined out of the Pollachi hoard[84] were 'well preserved',[85] and so we may assume that even if the hoard contained absolutely fresh coins,—of course, of a later date,— those could not have belonged to a date later than about half a century from the date of the six 'well preserved' coins. The hoard must have gone out of circulation about 77 A.D. Out of the two denarii that turned up at Vidiyadurrapuram[86] one is somewhat worn and the other is extremely so : the considerable difference observed in the degrees of wear is no exception disproving the general rule set out above, but is only a factor special to one of the two pieces of the find,—the former having for some time lain idle in the hands of some one to whom it had gone rolling, or the latter having had an exceedingly brisk life. These two may therefore have got lost in the flagging of the chaitya about 125 A.D , and may therefore have reached India about 120 A.D. Of the Kattanganni hoard[87] we have three coins issued between 2 B.C. and 11 A.D., and while one of them is but somewhat worn, two are very much worn : so, the batch comprising these coins entered the country about probably 80 A.D. and ceased wandering some five years later. For the other three finds[88] we have no appropriate data and we are unable even to hazard guesses about the chronology of their arrivals.

No finds terminate with coins issued in the reign of Gaius (Caligula), but this may be due to his reign having been very short, and to the issues of his reign having been quickly joined by those of his successors. Right in the middle of the reign of Claudius, we have the termination (47 A.D.) of the find of denarii at Yaswantpur;[89] the latest coins in the hoard being evidently 'in good preservation, with the faces on them sharp and clear', we may allow for that coin a circulation of about thirty years : the batch may therefore have reached India about 72 A.D. and ceased to circulate about 77 A.D.

In the same reign we get two finds of gold,— one of five aurei at Karur[90] terminating in 46–52 A.D. and another of six aurei at Tondamanathan,[91]— terminating in 51–54 A.D. We have no means of telling when the former batch reached this country, the condition of its components being unknown. The latter closes with a coin that is very much worn but the one immediately preceding it shows a lesser degree of wear. So, allowing some seventy years for the batch to reach India, we may set down the date of the advent of the hoard at about 120 A.D and the date when it ceased circulating at about 125 A.D. The two hoards of silver unearthed at Vellalur,[92] terminate with issues of 55 A.D., but we have no means of judging of when they could have flowed into the country.

The great hoard of 501 aurei found at Karukkakurichi (Pudukkotta)[93] terminates with a coin belonging to 75–9 A.D., but the coins are stated to have been 'unfortunately without exception in bad condition, having evidently been in circulation a long time before they were buried'. This is very inadequate as a description of the condition of a large hoard the earliest piece of which stands separated from the latest by a span not short of a century : what may be quite true of the earlier pieces cannot be more than be approximate in respect of the later ones. Probably the batch entered the land about 170 A.D. and got out of circulation about 175 A.D

Next comes the Madura hoard of aurei,[94] the latest coin in which, dated 82 A.D., is in very fine condition : in all probability the lot came in about 90 A.D. and remained afloat till about 95 A.D.

The terminal coin in the find of aurei at Kaliyamputtur,[95] issued in 97 A.D., being 'in excellent preservation', the hoard might have come in about 120 A.D. and might have become inert about 125 A.D.

Four finds are known which close with coins of Hadrian. The Karivalamvandanallur find[96] of six aurei closes in 118 A.D. with a coin that is somewhat worn : the hoard might therefore have reached the country about 160 A.D. and become immobile about 165 A.D. The Ongole taluk find[97] of two aurei, the later of the coins in which belongs to 124–8 A.D., and is slightly worn, yields about 170 A.D. as the date about which it might have arrived and about 175 A.D. as the date whereabouts it stopped migrating. We have none of the data that might help us to determine the date of the arrival of the batch of denarii that was discovered at Pakli.[98] Considering, however, that the hoard covers a very long span,— almost two centuries and a half,—and that even the earliest of the pieces were not too worn to be deciphered, we may assume that the arrival of the batch in India could not have been appreciably removed from the date, 119–25 A.D., to which the latest coin in it is assignable : the batch might have moved into India about 130 A.D. and come to the end of its wanderings about 135 A.D. The Jalalabad find[99] of three aurei terminates with a coin of 134–8 A.D., an aureus of Sabina, which does not appear to be fresh : the three coins might therefore

have been deposited in the Ahin Posh stupa about 160 A.D. The deposit included some Kushan gold coins, the latest of which,—the only one of Huvishka,—is said to be 'a very good specimen' in respect of preservation. As Huvishka's reign terminated about 142 A.D.,—as now is generally believed,—the condition of his coin in the deposit is not against the conclusion that the deposit was made about 160 A.D.

Five hoards close with issues of the days of Antoninus Pius. The Gaiparti find[1] of three aurei, which closes with a coin of 140–144 A.D., not appreciably worn, may have entered the country about 195–200 A.D., and reached Gaiparti about 205 A.D., Of the coins of the second Manikyala find[2] of a jewel of five aurei, we are told that 'on the whole they are in very good preservation' : the latest coin in the jewel belongs to 158–9 A.D., and so the jewel may have been fashioned in the vicinity of the year 170 A D , in the days of Marcus Aurelius, and it might have ceased to be worn about 210 A.D. The Nellore hoard [3] of a large number of aurei which terminates with 141–161 A.D., with pieces which are said to have been in mint condition, may have reached India about 165 A.D., and might have been deposited under a temple about the same year. The Mallayapalayam find[4] of four aurei and the Nandyal hoard[5] of over fifty-two aurei, both of which terminate with aurei of 145–161 A.D., in 'somewhat fine' condition, may have come in about 175 A.D., and ceased to pass from hand to hand about 180 A.D.

Three finds terminate with coins of the days of Caracalla. The Dharphul find,[6] closing in the year 212 A.D., is said to have been composed of issues which 'turned out excessively well preserved'. The adequacy of this description, in respect at least of the earliest coins in a hoard which covers a span of about seventy years,—possibly only fifty years,—may be open to question, but it may be accepted to the extent that the terminal coins should have been in exceedingly good preservation. Many of the coins of the great Kottayam hoard [7], which terminates with an aureus of 215 A.D., were in mint condition. The two hoards might therefore have reached the country practically at about the same time, that is about 220 A.D., and might have lost the faculty of circulation about 225 A.D. Of the coins of the Vinukonda hoard,[8] closing with 210–3 A.D., it has been said that 'all are in a good state of preservation', except that 'the legend on the obverse' of one of them, issued in 134–8 A.D [9], 'is illegible', but little reliance may be placed on the observation. If a legend on that coin was illegible, the condition of the two coins in the hoard belonging to 16–37 A.D., a full century earlier, could scarcely have been good ; indeed, the latest coin in the hoard, which, fortunately, is the one piece out of the hoard that has survived, has to be described as very much worn. The arrival of the hoard at Vinukonda has therefore to be assigned to much later times,—probably three-fourths of a century from the issue of the latest coin,—that is about 285 A.D. and its repose from circulation to about 290 A.D.

Somewhere in upper India is said to have been unearthed a hoard of twelve copper coins,[10] closing with a coin of Theodosius I, that is, in 378–395 A D. ; the hoard might have ceased to pass heads when the 5th century A.D. was starting on its course, for the earliest coin in the hoard is a century and a half earlier than the latest coin. This is the only instance of a hoard of 'copper' issues of Rome or Byzantium being found as treasure trove anywhere in India

The batch of six solidi which, out of the hoard of about fifty found at Puthenkavu,[11] was acquired for this Museum, closes with a solidus of Justinus I, 518-527 A.D., and it may be that that solidus, the condition of which is slightly fresh, was the latest issue in the hoard as well The hoard, then, might have reached Puthenkavu about 540 A.D., and it might have lost the migratory instinct by about 545 A D.

We may now pass on to a consideration of the chronology of the hoards in which occur pieces imitating Roman originals.

No data have been preserved that would enable us to decide when the imitations of the republican denarii of 83 B.C.,[11a] of the Livia denarii of Tiberius[12] and of the Hadrian Antoninus Pius aureus,[13] could have reached the country.

To 141–61 A D. belongs the aureus issued in honour of Faustina I the types of which have been imitated in the gold piece discovered in the Krishna district.[14] The piece is much paler in complexion than the original and appears to be a cast. Some lettering appears in the exergue of the reverse—a feature not present in the original. These circumstances point to the piece having been fabricated much later than the middle of the second century A D. to which the original belongs. The weight of the piece points to the period of falling standards between 196 and 215 A.D.,[15] but such lettering as we find in the exergue of the piece cannot be so early. The weight is fairly near to that of the lightest of the 'medallions' or over-weight coins, of Aurelian (270–5 A.D),[16] and mint-marks had by his time come to be common in the exergue : this piece may therefore have been made very shortly after Aurelian. Being somewhat fresh, the coin might have got withdrawn from circulation [illegible] A.D.

We know too little of the imitations of the coins of Commodus and Clodius found in the Rewa treasury[17] to be able to say anything useful about the possible date of their entry into the country.

The two pieces of the Upparipeta find[18] may, as we have already seen,[19] be taken to have been fabricated a little before 215 A.D., but in respect of style they approximate closely to the imitation of the aureus commemorating Faustina[20]. Their weights too are not much below that of the lightest of the 'medallions' of Aurelian nor much above that of the aurei issued by him after the reform he effected[21]. The Upparipeta pieces may therefore have been manufactured at about the same time as the Faustina piece, and their condition being very fine or somewhat so, they might have retired from circulation about 295 A.D.

Of the two genuine pieces included in the Gumada hoard,[22] the one issued in 200–1 A.D. is extremely worn,[23] and the other assignable to 202–10 A.D. is very worn.[24] To judge by the standards applied earlier to the various hoards containing genuine issues, these two coins may be taken to have entered this country about 350 A.D. We have already seen that the imitations of Roman originals issued between 175–6 A.D. and 211 A.D. were fabricated before 215 A.D.[25] So variously do these pieces seem to have suffered wear[26] that it is not quite obvious that they corroborate the dates we obtained from the genuine pieces for the arrival of the batch in this country but the lack of corroboration need not be a source of doubt, for the pieces being imitations, and some of them cast,[27] we cannot expect them to be as sharp and clear as the genuine pieces. The other two pieces in the find,[28] imitating probably issues datable between 305 and 330 A.D., have been hammered at too much to permit of any attempt at judging the amount of wear they have suffered. All that could therefore be said is that such data as we have are not inconsistent with the dates suggested on the basis of the extent of the wear of the genuine coins found included in the hoard,—namely 350 A.D. for the entry into the country, and 355 A.D. for the cessation of circulation.

The latest of the four solidi of the Malayadipudur hoard,[29] a coin of Anastasius (491–518 A.D.), being somewhat worn, the hoard may have reached India about 555 A.D. and may have stopped functioning as money about 560 A.D. The other three pieces, being imitations of issues of Theodosius II (408–50 A.D.), might have been manufactured appreciably later: if they were fabricated about 540 A.D., their appearance, which is somewhat fresh, will justify their being held to have entered this country along with the genuine coin of Anastasius and becoming inert about 560 A.D.

Emperor.		Date.	Terminus of Hoard. Region. A	E	F	Cessation of Circulation. Region. A	E	F
		B.C. 41	[Mk*a*.]	..	..	..	..	..
B.C.–A.D		39	..	..	[Kl.]	..	..	..
27–14	Augustus ..	A.D.	..	..	..	..	..	..
A.D. 14–37	Tiberius ..	16	..	..	[Po, Kg]			
		26	..	.. [Vi.]		..	..	..
37–41	Caligula ..	37	..	..				
41–54	Claudius ..							
		47	..	..	[Ya]	..	..	..
		51	..	..	To	..	..	..
54–68	Nero	54	..	..				
		66	..	..	..	..	..	..
69–79	Vespasian ..	71	..	..	..	..	..	..
		75	..	..				
		76	..	..	Kk	..	..	[Ya, Po]
		77	..	..				
		79	..	..				
		82	..	..	Md*b*	..	..	..
		85	..	..	..	..	..	[Kg]
		87	..	..	..	..	..	..
		95	..	..	..	..	..	Md*b*
96–98	Nerva	97	..	..	Kp	..	..	..
98–117	Trajan	100	..	..	..	[Mk*a*]	..	..

Emperor.		Date.	Terminus of Hoard. Region. A	E	F	Cessation of Circulation. Region. A	E	F
A.D.		A.D.						
		116	..	..	..	..	..	..
117–38	Hadrian ..	118	..	..	Kv	..	..	..
		119–125	[Pa]	..	..	..	..	[Kl]
		128	..	OnT	..	..	[Vi]	To, Kp
		130	..	..	..	..	..	..
138–61	Antoninus Pius.	134–137–138	Ja.*	..	..	[Pa]	..	..
		140	..					
		141	..	Ga	..	..	..	..
		144	..					
		159	Mkb	Ma Ml		Ne	..	..
		160	..		..	Ja*	..	..
161–80	Marcus Aurelius	161	..					
		165	..	..	..	..	..	Ne, Kv
		175	..	..	..	..	OnT	Kk
180–92	Commodus ..	180	..	..	..	..	Na, Ml	..
193–211	Sep. Severus ..	..	..	..	..	..	..	..
		205	..	..	..	..	Ga	
		210	..	..	..	Mkb	..	..
211–17	Caracalla ..	212	..	Dh	..	..	..	..
		213	..	Vk	..	..	..	..
		215	..	..	Koa	..	..	..
217–18	Macrinus ..	..	..	..	..	..	..	..
218–22	Elagabalus ..	..	..	..	..	..	..	..
222–35	Merander Senerus.	..	..	..	..	..	..	..
		225	..	..	..	..	Dh	Koa
		230	..	..	..	..	..	..
235–38	Maximinus I ..	..	..	..	..	..	..	..
238–44	Gordianus I–III.	..	..	..	..	..	..	..
244–49	Philippus I, II.	..	..	..	..	..	..	..
249–51	Trajanus Decius	..	..	..	..	..	..	..
251–54	Hostilianus ..	..	..	..	..	..	..	..
254–68	Gallienns Valerianus I–III Thirty Tyrants.	..	..	..	..	..	..	..
268–70	Claudius Gothicus.	..	..	..	..	..	..	
270–75	Aurelianus ..	..	..	..	..	..	..	..
		273	..	..	..	..	..	..
275–76	Tacitus.. ..		..	Ks D	..	..	..	..
276	Florianus, Probus.	..	..	Up	..	..	..	..
282	Carus.. ..	..	..	..	..	..	..	..
283	Numerianus ..	283						
284–305	Disocletianus ..	283–290–293	(Ul)[1]	..	(In)[4]	..	Vk	..
		294	..	..	..	..	Up	..
		300		..	..	..	KsD	..
305–11	Galerius ..	..	..	..	..	..	..	..
311–37	Constantinus I Magnus.	..	..	..	..	..	..	.
		315	..	..	..	..	..	..
		330	..	Gu	..	..	..	..
337–61	Constantius II.	..	..	..	..	..	..	..
		355	..	..	..	..	Gu	..
362–63	Julianus IV ..	..	..	..	.	..	..	..
363–64	Jovianus ..	..	..	..	..	..	..	..
364–75	Valentinianus I	..	..	..	..	..	..	.
375–92	Valentinianus II.	378	..	..	..	..	..	..
392–95	Theodosius I Magnus.	..	..	..	..	..	..	..
395–423	Honorius ..	395	Ulb[2]	..	..	..	..	..
408–50	Theodosius II.	410	..	..	..	Ulb[3]	..	..
423–25	Constantius III.	..	..	..	..	..	..	..
425–55	Valentinianus III.	..	..	..	..	..	..	..
455–57	Avitus ..	..	..	..	..	..	..	..
457–61	Majorianus ..	..	..	..	..	..	..	..
461–65	Severus IV ..	..	..	..	..	..	..	..
467–72	Anthenius ..	..	..	..	..	..	..	..
473–74	Glycerius ..	..	..	..	..	..	..	..
474–75	Julius II ..	..	..	..	..	..	..	..
476–91	Odovacer ..	..	..	..	..	..	..	..
491–518	Anastasius I ..	491	..	..	..	..	..	..
518–17	Justinus I ..	518	..	Ma	..	..	..	..
527–65	Justinianus I ..	527	..	..	Pu	..	..	Pu
		545	..	..	..	..	..	..
		555	..	..	..	..	..	..
		560	..	..	..	..	..	..
565–78	Justinus II ..	..	..	..	..	..	Ma	..
		570	..	..	..	..		

1 This place, it must be remembered, is in Afghanistan.
2 This hoard should be attibuted not only to region A but also to regions B, C and D as well.
3 This entry includes a number of finds in regions A, B, C and D: they are F 14: Ch, F 16, 17: Mi *a* F 15: Ab, F 18: Bi and F 13: Kj*b*.

We have no details about the emperors to whom all but a few of the 'brass' coins should be assigned; as the data suffer from indefiniteness we can pass in review only those of which we have some particulars. In seeking to evaluate the testimony of these pieces we cannot afford to forget that each of them is but a casual find and that the pieces might be but waifs and strays from hoards reaching down to later times. The coins collected in upper India without any note of the find-places[30] seem to establish that 'brass' was coming in along with gold and silver from practically the days when Roman coins started entering India and that it continued to the end of the 6th century A.D., and that there was a resumption of the flow about 975 A.D. which lasted a century. The pieces found at Chunar[31], Mirzapur[32] Allahabad,[33] Bindachal[34] and Kanauj[35] run from 283 A.D. to 293 A.D., establishing that the geographical range of the coins of little more than a decade was extensive indeed. Similarly, the coins found in south India for which no clue is available that helps to determine the precise find-spots,[36] run from 222 A.D. to 350 A.D. The coins found along the Coromandel Coast[37], at Mahabalipuram[38], and Kilakkarai[39], and at Tanjore[40] and Madura[41], and in the area round about Madura town,[42] range from 286 A.D. to 518 A.D. The evidence is, therefore, as cogent as may be that brass was steadily received in all parts of India in the first six centuries of the Christian era and in the eleventh century, except that there is no proof that could be pointed to that it reached the south in the first two centuries.

Mention may be made specially of the steady influx of 'brass' coins minted at Alexandria[43] in the two decades lying between 273 A.D. and 294 A.D. The pieces have been found at Tanjore[44] and at Chunar,[45] Kanauj,[46] and at many other places in upper India.[47]

The peculiar issues of brass which are reported to have been found in the town of Madura and in the immediate neighbourhood[48] are said to differ totally from the Roman brass found in Europe. The 'barbarous' character of these pieces and the circumstance that these were reported only from Madura led to the formulation of a theory that they were local imitations turned out at Madura, either because the local population was in need of coins for small change or because there was a Roman colony in the town which needed such change for its purposes[48]. Such pieces are not now available in Madura and the country round[49]. Coins of the same kind have been found in large numbers in various parts of Ceylon,[50] and the phenomenon has been explained on the hypothesis that 'they formed the currency of the Island,' the chronological limits being furnished by 'the fact that the greater number of the coins are of the last half the fourth century' A.D., and that 'the first half of the seventh century' is 'the latest probable limit.'[51] These 'Indo-Roman' coins are said to fall into two classes: 'the first closely adheres to the original, with the exception of the lettering, which baffled the native minters,' while the coins of the second class 'are far less skilfully executed,' and 'seem to be atleast of four sizes,' each merging into the next in size, the smallest 'with a weight of only some 3 grains'; the 'designs' deteriorate steadily.[52] Many of these coins might on close comparison with the regular issues turn out to be really genuine pieces: the thoroughly worn condition of the coins is bound to make even competent authorities suspicious of such pieces, even when they are genuine. In the degenerate days of the empire the execution of the brass issues was rarely up to the mark: a fall in the standard, not imitation in a foreign land, may be a truer explanation of the debased appearance of the Ceylon and the Madura specimens. The probability of the imitations having been manufactured in the lands lying on the way to India, the improbability of their having been prepared in India, the absence of a Roman colony in Madura in the fourth and the later centuries,[53] the utter futility of a small colony of foreign settlers at Madura starting a currency of small change either exclusively for themselves or for the town in which they were settled, and the total failure of the currency to pass beyond the limits of the town, are circumstances which, singly and cumulatively, speak against the issues having been indigenous imitations. The explanation has been offered that 'as the one Roman province (Egypt) in close touch with Taprobane was precisely the one in which gold and silver coinage came to an early end,' there was need in Ceylon for 'the curious imitations of late fourth-century Roman coins,' and that 'it seems that Roman merchants still carried on a lively trade with the distant island and that they actually found it convenient to export small change with them which was then multiplied by imitations on native soil'.[54] But there being no evidence to support the hypothesis of local multiplication, the imitations may all be taken to have been produced on the other side of the Arabian Sea. A simpler explanation of the phenomenon may be that these pieces are products of Egypt where similar imitations 'are found in great quantities,' having probably been 'the token money of the great landed proprietors, striking in practical independence of the Government.'[55]

We have now passed in review the facts relating to the finds of Roman coins in India. They speak to the beginning of commercial intercourse in the days of Augustus and to the continuance of it thenceforward without any serious break or marked fluctuation till the close of the 5th century A.D. In the 6th century a decline sets in which continues into the 7th, but thereafter the movement of trade was very slight till the middle of the 11th century A.D. when it ceased altogether.

APPENDICES.

NOTE ON ROMAN AND BYZANTINE COINAGE.

Early Period.

Roman coinage begins when Greek coins had come to be issued not only in Italy but even in Spain and Gaul, and after Etruria, Rome's neighbour, had enjoyed a currency system for over a century and a half. About 300 B.C. Rome started with a currency of bronze, the unit being the As, more a weight than a coin. With Rome's advance to a dominating position in Italy her coinage system adapted itself to the needs of Italian and trans-Italian intercourse. Silver was struck, about 245 B.C., to take the place of the heavy bronze, for atleast foreign trade, and copper coins, small in size, were also issued to serve as token coinage playing a subsidiary part in the trade with the south of Italy. Gold coins were issued in 217 B.C., but they were not a permanent feature of the currency for a long while. With the defeat of Hannibal, the silver coinage of Rome started on a career which not only kept step with Rome's territorial expansion but also extended beyond the regions to which Roman influence spread. Then followed a period of steady development, marked mainly by the resumption of issue in gold by Sulla in the course of his compaigns in the east. With Julius Caesar the position of gold in the currency became settled and in a few years it took pride of place. The variations in the weights of the units and the denominations and the changes in the tariffing of the metals in relation to one another were naturally many and were sometimes violent. The As kept falling in weight from atleast ten ounces to two. When the principal silver coin, the Denarius, was introduced, it was rated as equivalent to ten Asses, as its name denoted, and the mark X was probably placed on it to indicate the rate,[1] although even then the silver might have been rated abnormally high.[2] The state had to reduce the weights of the various coins from time to time, thus repudiating its debts, atleast partially, under cover of reforming the currency. Nor was the state averse to adopting expedients which were drastic, though subtle, to conceal its manipulations of the currency: instead of increasing the quantity of base-metal in the issues of silver,— a procedure the results of which would be obvious to any one who handled the coins,— it occasionally plated copper pieces with a coat of silver and mixed a quantity of the plated pieces with every issue of the genuine ones. The finances of Rome being, in this early period, under the control of the Senate, the coins often bear markes of the Senate's sanction.[3] The issuing of the coins, however, was, from about 289 B.C., entrusted to the tresviri[2]—'magistrates' who were recruited from the younger senators, just turned twenty-seven or twenty-eight, who were feeling their way into public life. These tresviri placed symbols,— perhaps the designs of their signet rings,— as identifying marks on the coins issued by them, but, later, their names, in abbreviations or in full, were stamped on the coins as signatures in token that the responsibility for the issue, under the authority of the senate, was theirs. Other magistrates, however, could issue coins for the discharge of their duties,—for instance, the quaestors who in 100 B.C. had to purchase corn[5] and the curule aediles to whom was entrusted periodically the conduct of the great Roman games.[4] As Rome grew and her provinces multiplied and the provinces became too many and too distant to be effectively controlled by the senate, the proconsuls or the imperators of the provinces issued coinages for their provinces in virtue of their special powers.[1] Even subordinate magistrates like quaestors and pro-quaestors,[2] could on occasion issue coins. Magistrates who in critical times acquired extraordinary powers set down on the coins the special authority under which they acted.[3]

The Empire.

When the empire became inevitable and Augustus founded it, the power of the emperor was broad-based on a combination of the powers of various magistrates of the republican period; it was mainly rested on the 'tribunicia potestas' at home and on the 'imperium' abroad, and the coins bore references to these powers.[4] The emperor could not, however, override the Senate altogether, nor could he suppress effectively the vassal kingdoms nor yet could he ignore the intensity of feeling in the provinces for equality with Rome or the keenness of the desire of local civic organisations, such as the cities, to retain their autonomy. The extent of the empire and the variations in its fortunes, with the consequent fluctuations in the rigour of its control over the provinces, were also circumstances which stood against the successful working of a centralised administration of the currency. In the result, a currency system arose which represented a reconciliation of the numerous interests involved. The issue of currency in gold and in silver came in time to rank among the exclusive functions of the emperor. The emperor would not at first mint gold at Rome as he would then have had to submit to the control of the Senate and so he had his mints for gold beyond the capital, but as that body receded into the background with the growth of the empire in strength, the emperor had gold minted in the capital itself. Only to the vassal kingdom of the Bosphorus, to which silver coinage had been unfamiliar, would he permit the independent coining of gold. A currency in gold was required as much for the needs of expanding commerce as for the prestige of the extensive empire, but silver was the back-bone of the internal currency system. The numerous countries of the empire had to endure the complexities of a bimetallic system in which strict regulation of the relations between the two metals was impossible. The gold aureus and the silver denarius were permitted the free run of the empire: this freedom served in some measure to mitigate the uncertainties of a system which could not easily be regulated. The coining of silver too was under imperial control, but provincial issues were not unknown: those of Cyprus, Cappadocia, Mesopotamia and Syria may be instanced. It is in the policy adopted in regard to the issue of copper that we realise how difficult it was for the emperors to subordinate local considerations to the need for evolving a currency wholly imperial. Copper coinage, which was reduced to the status of token money, was

placed in the hands of the Senate,[1] though liable in increasing measure to the control of the emperor. The coining of small change and occasionally of the aes was permitted to the provinces and to many of the provincial cities. The vassal kings issued coins with their own heads on one side and those side of the emperors on the other : in spite of the formal acknowledgment of the subordination to Rome, the coinage was independant in all essentials. The cities retained their autonomy : they issued coins in copper bearing the head of a divinity on one side and that of some local personage, mythological or historical, on the other.[1] The Roman colonies used Latin for the legends while the eastern cities used Greek ordinarily. Inumerable local mints were busy turning out coins which were sometimes imperial and often autonomous. The east of the empire was not so easily imperialised as the west. While the west was content with imperial gold and silver and with senatorial copper, the east retained just enough of autonomy to resist the imposition of copper, and occasionally, of silver.

The empire began with a system which aimed at ensuring purity of metal and accuracy of weight. The gold, the silver and the copper of the coins were pure, and the weights of the gold and the silver prieces were fairly accurate. The pieces of copper,— and those of brass, which was then introduced,— did not individually answer to a definite weight : they were struck at a certain number to the pound, individual pieces being allowed to vary in weight. Nero effected a slight reduction in the weights of the aureus and the denarius and introduced a little alloy into the latter. In the course of the following two centuries, however, the aureus was reduced step by step to about seven-tenths its original weight. The denarius was debased, about a century after Nero, to the extent of a quarter, and about thirty years still later the debasement was pushed to well over a third of the weight. Caracalla introduced, in 215 A.D., a new silver coin, called the Antonianus after himself, equivalent to about two denarii, and distinguished by the head of the emperor being struck radiate. Gradually the antonianus displaced the denarius, but it too succumbed to debasement and practically disappeared in the days of Gallienus. Indeed, so rank and chronic had debasement become that the introduction by Aurelian of a piece which, containing four per cent of silver, was given a thin wash of that metal to make it glitter, was hailed as a reform. This depreciation was due in some measure to the need of making great largesses to the poor of Rome who had to be kept in good humour and to the soldiers who were in need of such inducements to be loyal. But the more important factors were the continuous depletion of the empire's resources in the precious metals in consequence of the growth of her imports, for which, not being able to pay in goods, raw or manufactured, she had to pay heavily in coin, and the subsidies to foreign princes in return for which alone Rome's suzerainty was accepted along her frontiers.

Some part of the work of the mint, such as the casting of blanks, was entrusted to contractors : the direct employees of the state were slaves and freedmen, who were organized in military fashion. The provision of bullion for coinage, the withdrawal of the worn-out pieces from currency and the putting of new issues into circulation were effected by persons who undertook functions similar to those of banking.

From Diocletian.

So thorough was the deterioration of the currency system by the close of the third century A.D. that Diocletian was forced in 296 A.D. to effect drastic reforms which, naturally, were determined by the circumstances of the times. The impossibility of ruling the empire from Rome having become all too manifest, the empire was divided practically into four great regions, each under an Augustus or a Caesar, whose capital was where his shifting 'sacra domus' stood for the moment. This tetrarchy was merely the result of the unwieldiness of the empire, and a device for better administration : it was no concession to local ambitions. The other three tetrarchs worked in such close concert with and in such subordination to Diocletion, the senior Augustus, that tetrarchy was a powerful force keeping the empire intact. No longer did Rome and Italy enjoy special privileges : they were assigned the same status as the provinces. The Roman senate was denied all share in matters financial. The administrative machinery was shaped to one pattern and it got stereotyped all over the empire. Diocletian's reforms in the coinage answered faithfully to the changes that were being introduced in other directions. The provincial and the local mints, except the one at Alexandria, having by then ceased to function, he closed down that mint as well, and provided an imperial coinage for the whole of the empire, issuing it from a number of imperial mints which were located in such important centres as Rome, Aquileia, Londinium, Treveri, Thessalonica, Siscia, Nicomedia, Antioch, Alexandria and Carthage. He struck an aureus on a new standard, and so also a new denarius, known possibly as the Argenteus : he struck three different denominations including the Follis, in bronze, which, mixed with a little silver and coated with a light silver wash, was unfortunately tariffed out of proportion to its intrinsic value. Uniformity in style and in denominations was ensured by the mints being directed to conform to a standard common to all of them. The local issues with their distinctive features were swept aside and the imperial currency flourished without any rivals in the field. Greater regard was paid to the canons of finance and efforts were made to conserve the financial resources of the empire. Pains were also taken to ensure a steady supply of currency throughout the empire's far-flung dominions. The coinage of silvered bronze was the weak spot in the new system. Not only was it over-rated in relation to other metals but it was also permitted to be legal tender for practically heavy sums. The state, in all probability, made heavy profits out of the bronze, and so too should forgerers have, whether they were entrenched in the mints themselves or were compelled to eke out a precarious living outside. Depreciation was so heavy and the rise in prices was so sharp that a law had to be promulgated fixing prices for commodities and prescribing the severest penalties for infringement. This effort at regulation was naturally ineffective, and it was rendered even more futile when Domitian's successors started cutting down the weight of the pieces. Nothing, however, was done to arrest this depreciation, and, when

In Egypt the silvered bronze was not backed by money of gold or silver, the collapse of the monetary system was colossal and the misery of the people was terrific. None the less, no crisis developed in the rest of the empire on a scale at all comparable with those that had characterised the previous age. Gold became available in large quantities for the purposes of coinage. Diocletian's conquests in the east had brought in large stocks of the metal: the decline of the pagan faiths with the growth of Christianity freed the treasures that had become frozen in the pagan temples: private hoards were compelled to thaw and melt, and were forced to flow: silver came to be preferred to gold for articles of luxury: the outflow of gold beyond the empire was in all probability forbidden with severity. An ample coinage in gold became thus available generally and it tended to counteract many of the evils of a system of currency which was debased in part. The Roman coinage in gold continued to be so highly respected and so widely accepted that even the Sassanids of Persia, who were by no means friendly to Rome, struck, though intermittently, in gold.

The system of Diocletian formed the basis of that of his successors. But they manipulated the silvered bronze with disconcerting frequency, altering weight standards and exchan geratios: new denominations sprang up and circulated at rates that kept in almost continual flux. They had, however, the good sense not to lay irreverent hands on the gold and the silver coinages.

West and East.

The empire becoming temporarily divided in 312 A.D. into an eastern half under Constantine I (the Great) and a western half under Licinius, Constantine introduced a new system in his half which he rested on the gold Solidus and the silver Siliqua, and the system was introduced into the west as well when in 324 A.D he worsted Licinius. Further changes followed under his successors. A new follis and a new denomination, the Miliarense, were introduced. The weights of the various denominations kept rising and falling, and new denominations, such as the Centenionalis and the Nummis, came on the scene. Silver was allowed to become rare. Marks were placed on the coins,— especially those of silvered bronze,— to indicate not only the mints at which they were struck, but also the particular section of the mint,— the shop,— which was responsible for each issue: even the issue to which a coin belonged was noted on it. New mints sprang up in place of the old The handling of the currency system, however, seems to point to calculated severity,— to a policy that was heartlessly irresponsive to suffering on even a large scale. Spain was not allowed a mint and had to draw her supplies from Gaul, and Africa was similarly made to depend on Italy, except for an interval all too brief. Egypt was furnished with neither gold nor silver: it was restricted to bronze. The little need to maintain or move armies in Africa and in Spain and the apprehension that Egypt might assert its independence if it was allowed to flourish and fatten might have determined the features of this policy, but the policy included another factor which was not necessary for the purposes mentioned above,— the hindering of the free flow of money from province to province in answer to economic requirements. A strict ban lay on the sale of coins and on the carrying by merchants of any quantity larger than was strictly necessary for purely personal needs. The misery to which the Egyptian people were subjected after 324 A.D. in consequence of such restrictions is said to be almost without parallel. It looks almost as if private and social needs for currency were ignored in many provinces and as if currency was provided only where the state needed it for such purposes of its own as those of paying its hordes of civil servants or of disbursing the pay of the soldiers of its armies or for providing the largesses or doles to the discontented rabble of the larger cities. The state had lost heart: it seems to have become convinced that nothing that it could attempt would bring back prosperity to the provinces and that all its energies should be bent to the task of preventing affairs becoming worse. The people too had evidently come to feel that society was crumbling and that it could be kept intact only by ensuring that every man stood at his post, even against his wishes. A caste system arose, as a result, in which a child was born into its father's calling and could not run away from it except by furnishing a substitute The moneyers too were organized into one of such castes, and the business of moneying became a hereditary calling from which there was practically no escape.

In the meanwhile, the forces that had compelled Diocletian to device his tetrarchy kept growing in intensity till a radical solution became inevitable. The splitting up of the empire into an eastern and a western half in the early years of Constantine the Great pointed to the ultimate solution He did succeed in unifying the empire in 324 A.D., but he had come to realise how important to the empire the east had become, and so made Byzantium, or Constantinople, the capital in 330 A.D He could not prevent a second split when death, in 337 A.D. removed his strong hand: the division that resulted was real, though not formal: subordination to a central authority disappeared fast. Sets of two emperors familiarised the people with the need for an emperor in the east and for another in the west. Such restorations of unity as were attempted could only be provisional in the circumstances of the times The division became complete when, on the death of Theodosius in 395 A.D, the west was taken by Honorius and the east by Arcadius. All this while, the currency system was worked on the lines to which the people had become accustomed in the days following the death of Diocletian, but, a steady decline in all that is characteristically Roman sets in. The prosperity essential to the maintenance of a satisfactory coinage was on the wane In the western half the empire had been hit hard by the barbarian and it was still receiving vigorous blows: brigandage

was rampant: agriculture declined rapidly: trade and industries languished: sea-borne trade refused to cross the seas: marts and ports shrivelled: towns and cities dwindled in numbers and in prosperity. Britain writhed under the heel of the barbarian: Spain stood desolated; the people lay crushed by the heavy load of taxation and exaction imposed on them by the government. In times so unpropitious it is surprising that the currency of the west did not reach lower levels of debasement and depreciation than it actually did: barbarian coinages, modelled at first on that of Rome, but gradually deviating from it considerably took its place in the various provinces that succumbed to them. The east was however comparatively free from such diasters. Byzantium was rapidly taking the place in the east which Rome had occupied in the empire as a whole: she stood deeply rooted in all that was Roman in essence, but she did not disdain to learn new modes and develop new traditions which ultimately gave a special cast and a peculiar flavour to her culture. Rome lost its lead to cultures other than Roman. Byzantine coinage too kept developing in consonance with the culture that she was developing.

Byzantine Empire.

The Byzantine empire was firmly established by the time of Anastasius I, and his reform of the currency started Byzantine coinage on a sound basis. Under Justinian, who was on the Byzantine throne in the middle of the sixth century, Italy, Spain and Africa were recovered from the barbarians, the administrative machinery was overhauled, a great Code of law was promulgated, and a noble effort was made to keep Persia in check. But plagues and famines and great buildings and strenuous wars impoverished the people. Varying were the fortunes which attended the efforts of his successors to combat barbarian and Persian. Though in 627 A.D. the Sassanids were routed and crushed, Islam started in a few years on an invincible career of conquest and conversion, which deprived the empire of some of her fairest provinces. In the western provinces the barbarians started reasserting themselves, and they caused infinite trouble along the northern frontiers. The weaklings who then came to the throne in succession could do little for the empire. In the first half of the eighth century, Arab and Slav were beaten, and provincial adminsitration was reformed and financial disasters were retrieved, but the sectarian activities of the emperors led to a dissolution of political bond: and a deterioration of economic strength. Yet another series of weaklings ascended the throne and disappeared, having little inclination, ability or energy for activities that were not schismatic: the west was no longer sought to be retained under tutelage by force of arms. The middle of the ninth century saw a fresh attempt at administrative and financial reconstruction: the position of the military forces was emphasised: schismatic activities were thrust into the background: the comparative weakness of the powers along the frontiers of the empire was taken advantage of to recover south Italy and to bring the Mediterranean under control. Prosperity smiled on the empire at last. A movement was started in the tenth century to regain the lands lost long ago in Asia, and among the successes may be numbered the annexations of Crete, Cyprus, Aleppo and Antioch and the subjugation of all 'Phoenicia, Palestine and Syria': the troublesome Bulgars too were checked and quelled. But under a number of frivolous or futile emperors the empire relapsed in the second and the third quarters of the eleventh century into the inefficiency and chaos: the church, the bureaucracy and the landed aristocracy fought one another bitterly and could not unite and resist the Normans and the Turks who started attacking the empire with vigour.

The coinage of the Byzantine empire started well and maintained its prestige for centuries, especially in respect of the high standard that it set for itself in gold. Money was usually coined in all the three metals. The gold coinage held pride of place and it was generally issued in adequate quantities. Specimens of the silver coins are now rare, though probably the issues were not small in quantity. A high standard of purity in all the three metals was insisted on,— almost always in gold, and, at least in the earlier stages, in respect of the other two metals as well. The principal gold coin was the Solidus,[1] known also as the Nomisma and the Bezant, and had a range of currency very far beyond the empire's limits. Early in the eleventh century the shape of a cup was given to the solidus, probably to differentiate it from a solidus of a lighter weight that was coming into vogue. The two principal silver coins were the Miliaresion and the Siliqua. The bronze coinage introduced by Anastasius I was new in design and was distinguished by marks of value placed on the reverse.[2] A mint mark,—an abbreviation of the name of the place of issue,— and a shop-mark were also common. While at the beginning the weights of the bronze pieces appear to have been regulated with care, though there were differences in module, the worsening financial condition of the empire in later times was reflected in decreasing weights and in increasing debasement. From 538 A.D. the coins bore the regnal year of the king in which they were issued. The bronze coinage was reformed by Basil I, but little could be made of the later history of the currency,— especially because the various coins bore no indications of value. Restriking of bronze was common under Heraclius and Constantine IV, perhaps owing to shortage of supplies of the metal at the mints: the large bronze coins were, under Constans II, cut into twos and threes and re-issued. The number of mints varied with the empire's prosperity: three were working under Anastasius I; five functioned under Justin I and Constans II, and a dozen under Justinian and Heraclius: no more than two are known in the hundred years from the middle of the ninth century to the middle of the tenth; one mint was enough from the middle of the eleventh century. Latin survived for the legends till the eleventh century, though from the middle of the eighth a mixture of Greek and Latin letters was not unknown and Greek was commonly used for the obverse. The style of the coinage was fairly uniform especially in gold, but barborously executed issues and imitations were not uncommon.

[1] A half and an one-third of the solidus,—the semissis and the tremissis,—were also in vogue, but were not issued regularly.

[2] The denominations were marked M, K, I, E,— they being respectively pieces of 40, 20, 10 and 5 nummia.

Legends and Types.

The legends and the types on the early coins are worthy attention as they indicate the lines along which they grew and multiplied in later days, but they do not compete in interest with those which grew up when gold and silver were issued in plenty.

The obverse originally bore the head of Roma, the city goddess[1], or the head of Mars,[2] and the reverse bore the Dioscuri,[3] the twin brethern who had fought for the city, charging with spears at rest, or an eagle on a thunderbolt.[4] The legends were usually the names of the moneyers[5],—often comprising the praenomen, the nomen and the cognomen, and sometimes an agnomen, and even indications of relationship.[6] Quadrigae[7], bigae and the she-wolf and twins are among the variations on the reverse that came into fashion soon after. But allusions to contemporary events also came into vogue.[8] Gradually, the obverse comes to bear heads of various divinities besides Rome[9] and the reverse comes to bear types hitting at the contemporary affairs of the state,[10] and the legends serve as labels to the types,[11] describing them in various degrees of completeness. The circumstances that led to the transformation of the Republic into the Empire having been governed in part by the increasing importance of the personal element in the affairs of the state, the coins too strike the personal note with increasing clearness: the great men of Rome are portrayed on the coins with increasing frequency, and in 44 B.C. the Senate decreed that the portrait of a person still alive and active, Julius Caesar, shall be placed on coins:[11] thus started the rule that the portrait of the emperor, or of his colleague or of the members of his family, shall occupy the obverse. So important, however, was religion in the life of the people and so keen was the desire to commemorate historical events that the coins could not but bear types which in character were religious[12] or historical,[13] using the terms loosely.

Jupiter was the chief god of the state,[14] and a Jupiter, young in years and armed with a thunderbolt, represented probably the god defying the state's enemies. He was 'Conservator'[15] or 'Custos'[16] and protected the emperor with outstretched arm. Vulcan is appropriate on coins as he is the patron of the mint. Ceres as the goddess of the earth is equally appropriate as standing for a province like Africa that produced corn in great abundance or as representing the distributions of corn that were frequent in Rome's history. Apollo with his harp,[8] Neptune with his trident,[9] Hercules with his club,[10] Juno with her peacock,[11] Diana with her hounds,[12] and Sol radiating his bright rays,[13] are among the gods who were honoured on the coins. Venus had an honoured place, atleast because the founders of the empire claimed her for ancestress;[14] 'Venus Genetrice,'[15] and 'Venus Victrix' were among the forms in which she was worshipped. Apollo was honoured as 'Actius' by Augustus in gratitude for his having flown,— so the imperial panegyrists say,— to his aid at the battle of Actium in which he won the mastery of the Roman world.[16]

Coins were sometimes dedicated to a deity generally the patron of the person who issued the coin. A coin dedicated, for instance, to Juno bears her figure as a type and also a legend 'Junoni Reginae.'[17] The dedication itself might have been prompted by motives too subtle to find open expression: expresses were happy to wake Juno. the queen of the deities, their especial patroness, and they could, at the same time, represent themselves in the type of that goddess.

Minor powers or virtues held an important place in Roman religion. 'The Roman tended to see divine activity in every happening of life, however trivial. In course of time whole chains of happenings came to be associated with the powers of the major deities of the State, — war with Mars, agriculture with Ceres. But there was still room enough left for the activity of minor powers, conceived of as persons with more or less clearly defined functions and attributes. Thus, the great unknown power that turns the wheel of human fate was worshipped as Fortuna.'[18] Peace had no presiding major deity, but was placed under the guardianship of the minor goddess Pax.'[19] Over the harmonious relationships of public and private life Concordia presided, Pietas over the various manifestations of the peculiarly Roman virtue of Loyalty.[20] The ideal of political freedom is committed to the charge of Libertas,[21] that of honourable dealing to Fides. In the military sphere we meet the two soldier virtues, Virtus[22] and Honos, and above all others the Victory that accompanies step by step the march of Rome.[23] Finally, the Genius or spirit that presides over every person or place[24] is invoked in particular contexts.'[25] Constantia suggests the courageous resolve, the endurance, the firmness and the restraint that are essential to contancy.[26] Salus presided over health and safety,— whether the health of the imperial family[27] or the safety of the empire.[28] Securitas was the goddess of security,— whether the security of the emperor, recorded in legends such as 'Securitas Augusti,' or that of the state, noticed in legends such as 'Securitas Republicae,'[29] or that of the times, referred to in legends such as 'Securitas Temporum.' The prosperity and the happiness that come with peace were represented in Felicitas.[30] Joy or rejoicing was personified as Laetitia.[31] The Genius was a youth invested with patera and cornucopiae;[32] the presence of this unseen being was held in veneration; oaths were taken on the Genius of the people or on that of the emperor. Hopes of various kinds, such as those raised by the advent of a new prince or those which he held out to the people, were represented by Spes and alluded to in legends such as 'Nova Spes Reipublicae'.[33]

The fructification of an effort was symbolized as 'Good Success'. Nemesis[33] represented, not the idea of divine vengeance or retribution that has come to be attached to her, but the fear of the divine that should prompt one to be moderate in the hour of triumph, to quell the insolence that sways one at such a moment, and to bear righteousness in mind in turning the victory to account; such a use of victory leads naturally to Peace. Victoria was the embodiment of victory. She held a wreath and a palm, and she had wings which bore her aloft to the farthest corners of the Roman world.[34] She stood *with foot on helmet*;[35] *she erected trophies*; *she rode in quadrigae*;[36] she crowned emperors.[37]

A galaxy of these minor powers was evolved and the powers were invested with appropriate symbols. Aequitas held a pair of scales and a measuring rod;[38] and the Aeternitas the head of Sun and Moon;[38a] Concordia held the patera of sacrifice, Felicitas the caduceus,[39] Fides a plate of fruits and corn-ears, Fortuna a globe or cornucopiae and a rudder,[40] Liberalitas her account board[41], Moneta a pair of scales and cornucopiae[42], Pax an olive-branch[43], Providentia a wand and a globe,[44] Spes a flower, Tranquilitas a capricorn, and Virtus a spear and a parazonium.[45] Pietas was shown sacrificing,[46] Salus feeding her snake,[47] and Securitas leaning on a column. It should not be forgotten that these personifications were not mere abstractions; they were held to be active powers which were potent for good or evil and they could be influenced by vows paid or sacrifices made.

Sports and spectacles were celebrated to appease the wrath of the gods or to win their favour, among the most solemn of which were the Secular Sports, and it was scarcely given to any one man to live long enough to witness the celebration of more than one of them. Such an event was appropriately commemorated on the coins. Vows too were paid for the same purpose. The public ones were such as were made for the safety of the state. Decennial vows started with Augustus and were paid with zeal by the emperors,— with such zeal indeed that latterly they were paid once in five years. The undertaking of the vows and their accomplishment were both commemorated sometimes by the issues of coins.

Some of the types were personifications, not of virtues or of powers, but of entities like cities and provinces. Rome was one such, and in proof that her empire was eternal she was conceived of as 'Romae Aeternae'.[48] The later capital of the empire, Constantinople, was also personified.[49] So were the provinces, each with a characteristic emblem. The types are often illuminative of the treatment accorded from time to time to the provinces. Victory cutting the throat of a recumbent bull and the legend 'Armenia Capta,'[50] represent Rome's subjugation of Armenia. A claim to the conquest of the Germani is advanced on a coin showing a German woman in a sorrowful attitude, her spear broken.[51] The restoration of prosperity to various parts of the empire through the solicitude of the emperors or the preservation of a part of the empire from a catastrophe is commemorated in types which, for instance, show an emperor lifting a kneeling woman, who represents the province.[52]

Types drawn from mythology are not infrequent : examples are found in the slaying of the Nemean lion by Hercules,,[53] the flaying of Marsyas[54], the carrying of Anchises by Aeneas[55], and the she-wolf giving suck to the twins.[56]

The Roman people were ever in the minds of the authorities who issued the coins : they were personified in the 'Genio Populi Romani':[57] their 'hope' was alluded to in the legend 'Spes Romani Populi,' and their safety and glory were thought of in the legend 'Salus et Gloria Romanorum'. Concern for the safety of the public, as when corn was imported to Rome to alleviate distress in that city due to a scarcity in wheat, was signified by the legend 'Salus Publica.'

The influence of the Senate was often recognized on the coins. Those issued under the sanction of the Senate bore legends attesting the authority.[58] But the powers and influence of the Senate extended beyond the mere issuing of coinage : the Senate was ranked on a par with the Roman people : the phrase 'Senatus Populusque Romanus'[59] was common.

When the empire became a settled fact, there was little difficulty in permitting the head or the bust of a colleague or a relation of the emperor to be used as types. A colleague in the empire, or a prince or the empress, was honoured by being respresented on the coins. The emperor was generally mentioned in the legend by his family name, and his status was indicated by the term 'Augustus,' the vagueness of its significance making it the most distinctive of imperial appellations. In later times the title 'Dominus Noster' became common. The supremacy of the military power which he wielded was marked by the term 'Imperator' : this title was especially in evidence on the gold and the silver coinages as they were the imperator's issues. His achievements gave him titles such as 'Britannicius'[60] and 'Germanicus'.[61] As head of the state religion he was 'Pontifex Maximus'; in recognition of the paternal character of his guardianship of the state he was called 'Pater Patriae',[62] which became the title of highest honour that an emperor could bear. A prince was styled Caesar, till he became a colleague of the emperor, as sometimes happened ; he was also called 'Principes Juventutis';[63] it was usual for him to be complimented by the equestrian order with a presentation of a silver spear and buckler.[63a] The wife of the emperor was called an 'Augusta'.[64] Sometimes the need was felt for indicating how an emperor stood related to his predecessor.[65] Usually the

emperor was shown wearing a laurel crown, an attribute of Apollo;[66] a radiate crown, the attribute of the sun-god came into vogue a little later[67]; a diadem set with pearls was the last of the fashions in imperial wear.[68] The position which the emperor held in the imagination of the people was exemplified in full on the coins; he was represented as a general addressing his troops,[69] or as a priest engaged in sacrificing for the prosperity of his people; [70] he was shown riding abroad on a prancing steed[71] and returning in solemn state on an ambling horse, acknowledging the acclamations of the crowd with up-raised hand.[72] If he returned from victories in the field he was shown standing in a quadriga,[73] and it was not unusual to set up a triumphal arch on which was inscribed a legend setting out the name of the enemy who had been vanquished.[74] The vows paid annually or on special occasions such as recovery from illness, or on the expiry of every five years of a reign were pictured in a tableau of the emperor sacrificing at an altar and explained in legends incorporating the term 'Vota' [75]. The distributions of 'liberalitates' or largesses on occasions such as the emperor's accession, or of a victory won by him or of a return from a journey to a province, were depicted in a scene in which the emperor, seated on a platform, superintended the distribution, and were recorded in legends such as 'Liberalitas Augusti.'[76] An emperor was worshipped with almost divine honours in his own life-time: while the cult was sedulously propagated in the provinces it was kept within limits at Rome. Sometimes an emperor began by placing himself under the special protection of one of the gods, but ended by identifying himself with that god. The empress was similarly Ceres,[77] Constantia,[78] Pax,[79] or Venus or Vesta or other goddess, in turn. Just as the emperor was 'Pater Patriae'; the empress could be 'Matri Magnae,' being equated to Cybele. The heir-apparent was normally elected to membership of the four religious colleges. To commemorate the co-option of Nero, when no older than fourteen, into all the four sacerdotal colleges as a supernumerary, a coin was issued on which were figured the four instruments of sacrifice of the four colleges[81]. A lady of the imperial family could be assigned the honours of a vestal: Caligula made an Augusta of his grandmother, Antonia,[82] enrolled her a priestess of the temple of Augutus and conferred on her the honour of a vestal. The emperors, or other members of his family, were often consecrated on death, though not forthwith in all cases, he or she becoming a 'Divas' or a 'Diva'[83]; worship was offered to them, and even temples raised in their honour. The emperor was usually figured on the obverse, while to the reverse were relegated the representations of the members of his family, whether contemporary or consecrated.[84] When more than one emperor was on the throne the cordial relations subsisting between them were depicted by their being shown with clasped hands and were celebrated in the legend 'Concordiae Augustorum [85]'.

The importance of the empire to the state was stressed in legends like 'Felicitas Temporum '[86]. and that of an uninterrupted succession was sought to be expressed in the type of Providence[87] and in legends such as 'Providentia'[88] and 'Providentia Deorum' [89] in which allusion was made to the prudence and wisdom that direct the emperor's choice of a successor and to the divine providence that is behind that choice. When an emperor was found by the Senate and the people to be the perfect specimen of his class, they expressed their gratitude to him, styled him Optimus and dedicated an issue of coins to him.[90] In the days when it became the special concern of the emperors to lay stress on the glory of the state or when it became necessary to provide for the security of the state or to ensure its safety, the legends on the coins expressed the concern: we are told of the 'glory of the Romans,' [91] the 'security of the republic' [92] and 'perpetual security'[93] and of the achievement of 'blessed tranquillity.'[94] An improvement in the posture of affairs was indicated by an issue recording 'the happy amendment of the times.'[95] These coins are excellent indices to the apprehensions, the trials and the hopes that animated the people in such times.

The importance of the army was fully acknowledged on the coinage. The valour of the soldier was personified as Virtus, and the emperor's own valour was 'Virtus Augusti'.[96] A group of officers is sometimes shown accompanying the emperor,[a96] surrounding the emperor, whom, often he is addressing [97] The fortitude of the army and its valour in the campaigns against the barbarian tribes, such as the Gallic and the Alamannic, were acknowledged in types depicting armed soldiers and their standards and in legends like 'Gloria Exercitus.'[98] References to wars are contained in coins such as those that record the quelling of the barbarians on the frontiers or an incident in a war such as the Cimbrian.[99] Military successes are found commemorated in types such as that of a Victory inscribing a record of a triumph on a shield.[1] To the practice of soldiers offering up in some temple the shields of which they had despoiled their antagonists should be traced the type showing a shield marked as being votive.[2] Even the 'toga picta' which was a component of the costume of a triumpher could be represented on coins if it conveyed an idea, though only symbolically.[3] An officer who had the government of a province of the emperor could coin money for the use of the army, especially if war broke out, and in virtue of his authority could place his name and style on the coins he issued.

Symbols were very common. The rudder stands for government[4] and the globe for world-power;[5] the pileus symbolises liberty:[6] piles of arms or a trophy point to a victory:[7] cornucopiae stand for plenty and prosperity:[8] the star denotes consecration [9] The laurel crown[10] marks the emperor; it was conferred only on those who had reached pro-consular status; it was denied even to a Caesar. The radiate crown[11] was the attribute of the sun and also of Apollo, and so it symbolised beneficence and eternity: originally it signified the deification of the emperor. The crown of

corn-ears [11] was assumed by the ladies of the imperial family who were identified with Ceres. The oak-wreath, the ' Corona civica ',[12] awarded usually to one who had saved a citizen in battle, came to be the greatest of military awards, and ranked among the proudest of imperial emblems, especially as it became customary to bestow it on an emperor who had done something that entitled him to be styled the preserver or the saviour of the people. A palm branch was borne by a conqueror at the triumph, and he was received with palm-branches.[14] The military ensigns were of the highest importance to an empire that rested on the army.[15] The eagle was the principal standard of the legion.[16] Fasces, or bundles of birchen rods, with a securis or axe bound up in the middle, having been usually carried before the higher magistrates, came to signify powers of life and death.[17] The curule chair represents the curule office.[18] The simpulum is the emblem of the pontifex, the lituus of the augur, the patera of the septemvir, the tripod of the quindecemvir.[19] 'The butting bull of Augustus has a double reference,— a local one to south Gaul and a personal reference to Augustus, who was nicknamed Thurimis.'[20]

Historical allusions are noticeable in types such as that of Sulla in his triumphal quadriga,[21] or that of the taking of hostages from the Germanic tribes,[22] or that of the assignment of kingdoms to conquered princes.[23] The discovery of Claudius by praetorians who found him in hiding on the murder of Caligula, his being taken to the praetorian camp, the swearing of allegiance to him by the praetorian guard and the acceptance of that choice by a Senate which found itself impotent to oppose the guard,— these are summarised in the two legends, 'Imperator Receptus,' which relates to the reception in the camp,[24] and 'Praetorianus Receptus,' the acceptance by Claudius of the oath of allegiance sworn by the praetorians.[25] Political propaganda is not wanting : for instance, the coin bearing Libertas as legend and type,[26] which was issued by Brutus, was expected to canvas public opinion in favour of the champions of liberty and against the triumvirate. When Trajan called in the silver of the republican period and issued his own silver coins, he utilized a series of types of the republican period, including representations of the avowed opponents of the empire, in the hope that the people could thereby be induced to believe that the empire was but the culmination of the republic.

Buildings were often represented. Various temples were pictured : [27] so too were aqueducts,[28] camps[29] and forts.[30] We have representations of the Forum of Trajan[31] and sketches of such structures as the platforms on which the emperors were seated when making largesses[32] and the pillars which graced important cities,[33] the well-head in the forum at Rome which became the resort of money-lenders,[34] and the statue of Marsyas which had been set up in the same forum,[35]— probably as 'the centre of Roman institutions.' The solicitude for the defence of the fortresses and the cities of the empire is testified to by a type of the gates of a city[36] or a fort[37] and a legend like . . (?)

The paganism of Rome was for a brief while thrown into the shade by the sun-god[38],— 'the invincible' one,[39] whose cult was then probably associated with that of Mithras. But Christianity, which had been steadily gaining ground, forged ahead, converted the emperor and began to appear on coins in symbols such as the cross or the ' Monogramma Christi[40]'. On the imperial ensign, the labarum, was placed the monogram, which in time grew to signify the salvation of the state.[41] The cross was placed in the hand of the emperor,[42] or on a graduated pedestal,[43] or within a laurel crown[44] ; on globes it was substituted for Victory, when the emperors came to attribute their successes to that symbol.[45] The deities and the personifications of the pagan pantheon yielded place to the Saviour, the Virgin, the Saints and the sacred emblems.[46] If ' Victory ' survives, she has to bear a sceptre on top of which has been placed the cross or the monogram.[47]

Dating.

Roman coins do not bear on them the dates of their mintage in any well established era, in spite of their having used an era starting from the foundation of Rome. None the less, they are generally datable with ease, the chronological framework of Roman history being clear from practically the earliest times of Roman numismatics : professed works of history, literary remains and commemorative inscriptions are abundant for long periods of Roman history and they furnish the full details that even exacting chronologists demand. The name of a moneyer on the republican issues, or the portrait, the name and the style of an emperor is usually enough to determine within narrow limits the period to which an issue has to be assigned. On the imperial coins especially are to be found certain details which ensure an accurate chronological attribution. The imperator as the generalissimo of the Roman armies was entitled to the credit of all victories, even though won only by proxy, and so he could acclaim himself imperator as often as there was occasion.[48] A Roman magistrate,[49] consul [50] or censor [51] or tribune [51] had his power renewed every time he occupied the office, and when these magistracies were assumed by the emperor, as he invariably did, the fiction of periodical renewal, however, was maintained. These appellations help to date the coins with considerable precision. So too do such legends as indicate the distribution of largesses[53] and the performance of vows.[54] A numeral indicates the number of the occasion, except, usually, in the case of the first.[55] Even if such indications were absent, the dating should not be very difficult, for the legends of the imperial coins refer often to wars, victories, conquests[56], triumphs, journeys to and from provinces,[57] events

such as 'the quiet retirement of the emperors' and other similar occurrences of which the dates are known from other sources. It is true that coins recording the consecration of certain imperial personages were sometimes issued long after their deaths. It is also true that cases are not unknown of coins being issued in commemoration of persons who were then dead, without any indication on the coins of any of them having become a divus : instances of such are furnished by the commemoration of Tiberius by Caligula,[58] of Augustus by Vespasian[59] and of Hadrian by Antonious Pius. But these are exceptions which do not affect the generality of the rule that the legends on the coins are of considerable help in determining the dates of their issue. Where such aids are wanting, or where they fail to help, considerations such as the weight of the coin, the character of the type, the palaeography of the legend, the style and the fabric of the issue, are of much help in determining chronology. The indication of the regnal year,— on the model of the imperial coinage issued from Alexandria, for instance,— was a device which was adopted in the Byzantine period.

EGYPT.

Egypt's wealth in corn and Rome's dependence on it for her food supplies induced Augustus, when he took Egypt, to take measures to prevent the province going under the jurisdiction of the Senate or falling into the hands of an antagonist ; so, he treated it as his personal domain into which no senator or opponent could set foot, and his successors continued to treat the province as one that was peculiarly their own. It was a distinct entity in the empire,— both politically and economically. Foreign coins were not permitted by way of currency : only bronze of different denominations, minted in the province, was furnished. In the tetradrachm was contained a small percentage of silver, varying from time to time. Evidently, this 'was called silver by courtesy' and 'this fiction was carried ', at least in the earlier stages of the Roman occupation, 'to such an extent that a premium was demanded when the citizen paid his taxes in smaller units than the tetradrachm'.[1] Consonant with a custom established by the Ptolemies, a premium seems to have been also leviable when payments were made in coins that were old or were worn.[2] The Alexandrian coins were probably exchanged for Roman coinage at rates fixed by imperial edict.[3] So effective was the control that inflation does not seem to have set in at any time, except in the closing quarter of the third century A.D. The system continued with a few variations to the end of that century, and, thereafter, the need for the isolation of Egypt having passed, the system of currency obtaining in the rest of the empire was extended to Egypt as well.

The issues in Egypt evidence a compromise between the Greek and the Roman styles of coinage. The portraits on the obverse were often inadequate renderings of the emperors, as they could ordinarily be only copies of the portraits on the Roman coinage ; sometimes they were even untrue, as owing to the keenness for issuing coins of the first year of a new emperor, the mint-master could not wait for the receipt of an authentic portrait from Rome or the imperial camp and had to make the portrait of the previous emperor do duty instead. The legend on the obverse gave the name of the emperor in Greek, together with the title 'Augustus,' though exceptionally the appellation Kaioap EtBaTos was used. In conformity with the practice on the Greek imperial coins the Alexandrian issues do not usually refer to the emperor being clothed with the imperatorship and the consulship and the tribunician power. The types on the reverse were usually taken from subjects of Greek or Egyptian mythology or were personifications similar to the Roman ones, or were representations of animals,— especially of Egyptian habitat,[4]— or of the buildings of Alexandria.[5] Some of the mythological characters and personifications had their Roman equivalents : Zeus had Jupiter ;[6] Dikaiosyne had Aequitas,[7] Elpis had Spes,[8] Nike had Viceroy,[9] and Honoria had Concordia ;[9] among those that had none such seem to be Eirene [11] and Tyche.[12] The eagle was represented on a thunderbolt,[13] being the bird of Zeus, or was intended to signify the aquila of the Roman legions. The year of issue of a coin was denoted by a numeral indicating the emperor's regnal year to which was prefixed the letter L to show that the numeral referred to a year.[14]

TABLE OF ROMAN AND BYZANTINE EMPERORS.

JULIO-CLAUDIANS.

B C 27–A.D. 14	Caius Julius Octavianus, AUGUSTUS.
A.D.	
14–37	TIBERIUS Julius Caesar.
37–41	GAIUS Julius Caesar (CALIGULA).
41–54	Tiberius CLAUDIUS Nero Drusus Germanicus.
54–68	NERO Claudius Caesar Agustus Germanicus.
68–69	Servius Sulpicius GALBA.
69	Marcus Salvius OTHO.
	Aulus VITELLIUS.

FLAVIANS (I).

A.D.	
69–79	Flavius VESPASIANUS.
79–81	Fl. Vespasianus TITUS.
81–96	Fl. DOMITIANUS.
96–98	Marcus Cocceius NERVA.
98–117	Nerva TRAJANUS.
117–138	Aelius HADRIANUS.

ANTONINES.

138–161	Titus Aurelius F.B.A. ANTONINUS I PIUS.
161–180	MARCUS AURELIUS Antoninus II.
169	M. Antoninus III LUCIUS VERUS.
177, 180 } 192	Lucuis Aurel. COMMODUS Antoninus IV.

SEVERI.

193	Helvius PERTINAX.
193	M. Didius JULIANUS I.
193–211	L. SEPTIMIUS SEVERUS I.
194	PESCENNIUS Niger.
197	CLODIUS Albinus.
198, 211 } 217	M. Aurelius Antoninus V. (CARACALLA).
209–212	Antoninus VI GETA ; P. Septimius GETA.
217–218	M. Opellius MACRINUS.
218	ANTONINUS VII Diadumenianus.
218–222	M. Aurelius Antoninus VIII (ELAGABALUS).
222–235	M. Aurel SEVERUS II ALEXANDER.
	L. J. A. URANIUS ANTONINUS IX (East).
235–238	C. J. V. V. MAXIMINUS I.
236–238	MAXIMUS I.
238	M. Antoninus GORDIANUS I.
238	M. Antoninus GORDIANUS II.
	M. Clodius Pupienus MAXIMUS II.
	D. Caelius Calvinus BALBINUS.
238–244	Antonius GORDIANUS III.
244–249	M. Julius PHILIPPUS I (Arabs).
248–249	M. JULIUS PHILIPPUS II (Junior).
249–251	C. Messius Trajanus DECIUS.
	HERENNIUS Etruscus.
251–252	HOSTILIANUS.
253	C. Vibius Trebonianus GALLUS I.
	C. V. Volusianus GALLUS II.
253–254	M. Aemilius AEMILIANUS.
253, 254 } 268	P. Licinius GALLIENUS.
254–255	Q. J. GALLIENUS.
260	P. Licinius VALERIANUS I.
259	Licinius VALERIANUS II.
256–259	SALONINUS
	VALERIANUS III.

THIRTY TYRANTS.

258–67	POSTUMUS.			258	INGENUUS.
		261	BALISTA, CYRIADES.		
		261–2	Ful. MACRIANUS I.		
			MACRIANUS II.		
			QUIETUS.	263	A. AEMILIANUS II.
		264–7	Sep. ODAENATHUS.		
265–8	VICTORINUS.	265–6	HERODES.		
		266–73	ZENOBIA.		
267	LAELIANUS.				
267–8	MARIUS.			267–70	M. A. AUREOLUS.
268–74	TETRICUS	270			
		270–2	VABALATHUS.		
				274	FIRMUS I.

FLAVIANS II.

A.D.
268–270 M. Aurelius CLAUDIUS II GOTHICUS.
270 M. A. Claudius QUINTILLUS.
270–275 L. Domitius Val. AURELIANUS.
275 [*Interregnum*]
275–276 M. Claudius TACITUS.
276 M. Annius FLORIANUS.
276 M. Aurelius V. PROBUS.
282 M. Aurelius CARUS.
283 M. Aur. NUMERIANUS.
283 M. Aur. CARINUS.
JULIANUS II.
284–305 C. Aur. Val. DIOCLETIANUS.
286–293 CARAUSIUS, ALLECTUS.
JULIANUS III.
286–305 M. Aur. Val. MAXIMIANUS I.
305–311 C. GALERIUS Val. Maximianus II.

CONSTANTINIANS.

305, 311 } 337 Fl. Val. CONSTANTINUS I, Magnus.
305–306 Fl. Val. CONSTANTINUS II (Chlorus).
306–307 Fl. Val. SEVERUS III.
M. Val. MAXENTIUS.
307–324 P. Val. Licinianus LICINIUS III.
310–313 Gal. Val. MAXIMINUS, Daia.
337–361 Fl. Jul. CONSTANTIUS II.
337–340 Fl. Jul. CONSTANTINUS II.
340–350 Fl. Jul. CONSTANS I.
350 VETRANIO; NEPOTIANUS.
353 MAGNENTIUS.
351–353 DECENTIUS.
355 SILVANUS.
361–363 Fl. Cl. JULIANUS IV, Apostate.
363–364 Fl. JOVIANUS.

WEST.

364375 Fl. VALENTINIANUS I.
367, 375 } 383 Fl. GRATIANUS I.
375, 383 } 392 Fl. VALENTINIANUS II.
383–388 MAXIMUS III.
392–394 EUGENIUS.
395 Fl. THEODOSIUS I, Magnus.
395–423 Fl. HONORIUS.
405 MARCUS.
406 GRATIANUS.
407–411 CONSTANTINUS III.
409–410 Pr. ATTALUS.
409–411 CONSTANS II.
410 MAXIMUS IV.
411 JOVINUS.
412 SEBASTIANUS.
421 Fl. CONSTANTIUS III.
423–425 JOHANNES I.
423, 425 } 455 Fl. Pl. VALENTIANUS III.
455 Petronius MAXIMUS V.
455–457 M. M. AVITUS.
457–461 MAJORIANUS
461–465 Fl. L. SEVERUS IV.
465–467 [*Interregnum*].
467–472 Fl. P. ANTHEMIUS.
472 Olybrius.

EAST.

364–378 Fl. VALENS.
365–366 PROCOPIUS.

THEODOSIANS.

378–395 Fl. THEODOSIUS I, Magnus.
383–408, 395 } Fl. ARCADIUS.
408–450 Fl. THEODOSIUS II.
450–457 Fl. MARCIANUS.

LEONINES.

457–474 Fl. LEO. I.

A.D.		A.D.	
473–474	Fl. Glycerius.		
474–475	Julius II, Nepos.	474	Fl. Leo II.
		474–475	Fl. Zeno.
475–476	Romulus Augustus.	475–477	Basiliscus.
476–491	Fl. Odovacer.		
		477–491	Fl. Zeno (restored).
489	Theodoric.		

East.

491–518 Fl. Anastasius I.
514–515 Vitalian (Pretender).

Justinianeans.

518–527 A. Fl. Justinus I.
527–565 A. Fl. Justinianus I.
565–578 Fl. Justinus II.
578–582 Fl. Tiberius II Constantinus.
582–602 Fl. Mauricius.
590–602 Theodosius.
602–610 Phocas.

Heraclians.

610–641 Heraclius I.
613–641 Heraclius II (Constantinus III).
638–641 Heraclonas.
641 Tiberius III.
641–668 Constans II, (Constantinus).
654
659–680 Constantinus IV, Pogonatus.
668 Heraclius IV.
680
685 Tiberius IV.
685–695 Justinianus II.
695–698 Leontius.
698–705 Tiberius V, Apsimarus.
705–711 Justinianus II (restored).
Tiberius VI.
711–713 Philippicus, Bardanes.
713–716 Anastasius II, Artemius.
716–717 Theodosius III.

Isaurians.

717–741 Leo II, Isaurian.
720, 741 }775 Constantinus V. Copronymons.
742–744 Artavasdes, Nicephorus.
751
755–780 Leo IV.
776
780–797 Constantinus VI.
797–802 Irene.
802–811 Nicephorus.
803
811–811 Stauracius.
811–813 Michael I, Rhangabe.
Theophylactus.
813–820 Leo V, Armenian.
Constantinus.

Amorians.

820–829 Michael II, Amorian.
821
829–842 Theophilus.
832–839 Constantinus.
842–867 Michael III, Drunkard.
866, 867 }886 Basilius I, Macedonian.
869–880 Constantinus.
870
886–912 Leo VI, the wise.
911–954 Alexander.
912–913 Constantinus VII, Porphyrogenitus.
913

A.D.

913–919 ZOE.
919–944 ROMANUS I, Lecapenus.
921–931 CHRISTOPHORUS.
924–945 STEPHANUS.
CONSTANTINUS VIII.
945
959–963 ROMANUS II.
963
963–1025 BASILIUS II, Bulgaroktonos
963–1028 CONSTANTINUS I.
963–969 NICEPHORUS II, Phocas.
969–976 JOHANNES II, Timisces.
1028–1034 ROMANUS III, Argyrus.
1034–1041 MICHAEL IV, Paphlagonian.
1041–1042 MICHAEL V, Kalaphates.
1042 ZOE : THEODORA.
1042–1055 CONSTANTINUS IX, Monomachus
1055–1056 THEODORA.
1056–1057 MICHAEL VI, Stratioticus.
1057–1059 ISAACIUS I, Comnenus.

DUCAS.

1059–1069 CONSTANTINUS XI, Ducas.
1067 EUDOCIA.
1067–1078 MICHAEL VII, ANDRONICUS I, CONSTANTINUS XII.
1068–1071 ROMANUS IV, Diagenes.
1071
1078–1081 NICEPHRUS IV, Botaniates.

AFGHANISTAN—					
Jalalabad ...	......	Jalalabad ...	Ja ...	36	(A)
,,	......	Hidda ...	Hi ...	49	(A)
Kabul Valley	......	......	KV ...	46*b*	(A)
INDIA	......	......	In *a* ...	41*a*	A—F
,,	......	......	In*b* ...	41	
,,	......	......	In*c* ...	46*a*	
UPPER INDIA	......	......	UI*a* ...	11	A-D
,,	......	......	UI*b* ...	20	A-D
,,	......	......	UI*c* ...	50	A-D
NORTH-WEST FRONTIER PR.—					
Hazara ...	......	Pakli ...	Pa ...	66	A
PUNJAB—					
Rawalpindi ...	Rawalpindi ...	Rawalpindi ...	Ra ...	32	A
,,	,,	Manikyala ...	Mk*a* ...	21	A
,,	,,	,,	Mk*b* ...	45	A
,,	,,	Taxila ...	Tx ...	92	A
UNITED PROVINCES—					
Allahabad ...	Allahabad ...	Allahabad ...	Ab ...	15	C
Farrukhabad ...	Kanauj ...	Kanauj ...	Kj*a* ...	12	C
,,	,,	,,	Kj*b* ...	13	C
Mirzapur ...	Mirzapur ...	Mirzapur ...	Mi*a* ...	16	C
,,	,,	,,	Mi*b* ...	17	C
,,	,,	Bindachal ...	Bi ...	18	C
,,	Chunar ...	Chunar ...	Ch ...	14	C
Muttra ...	Muttra ...	Muttra ...	Mu ...	94	C
SOUTH INDIA	......	......	SI*a* ...	40	EF
,,	......	......	SI*b* ...	46	EF
,,	......	......	SI*c* ...	69	EF
,,	......	......	SI*d* ...	88	EF
,,	......	......	SI*e* ...		EF
BOMBAY—					
Surat ...	Surat ...	Surat ...	Su ...	1	E
,,	Jalalpur ...	Nagdhara ...	Nd ...	54	E
Bombay ...	......	......	Bo ...	55	E
Khandesh East ...	Raver ...	Waghode ...	Wa ...	56	E
Sholapur ...	......	Dharphul ...	Dh ...	25	E
CENTRAL INDIA—					
Rewah ...	......	Rewah ...	Re ...	37	C
MAYURBHANJ—					
Bamanghati ...	......	Bamanghati ...	Ba ...	34	D
NIZAM'S DOMINIONS—					
Nalgonda ...	Suryapet ...	Gaiparti ...	Ga ...	89	E

MADRAS—					
Coromandel Coast	......	......	CC	27	EF
Vizagapatam	Jeypore	Gumada	Gu	84	E
"	"	Kotpad	Kt	77	E
Ganjam	Chicacole	Salibundam	Sa	67	E
Godavari	......	Upperipeta	Up	81	E
Kistna	......	......	KsD	68	E
"	Divi	Ghanthasala	Gh	95	E
"	Bezwada	Vidiyadurra-puram.	Vi	47	E
Guntur	Sattenapalle	Amaravati	Am	11c	E
"	Vinukonda	Vinukonda	Vk	51	E
"	Ongole	......	OnT	72	E
"	......	Mallayapalem.	Ml	78	
Cuddapah	Rajampet	Athirala	At	23	
"	Cuddappah	Cuddappah	Cu	33	
Kurnool	Nandyal	Nandyal	Na	90	
Nellore	Nellore	Nellore	NeD	2	
Chingleput	Chingleput	Mahabalipuram.	Mp*a*	19	F
"	"	"	Mp*b*	38	F
"	"	"	Mp*c*	44	F
"	Saidapet	......	SpT	42	F
"	Madhuranta-kam.	Alamporai	Al	9	F
Madras	......	Mambalam	Mb	85	F
Arcot, South	Cuddalore	Tondamana-tham.	To	82	F
Tanjore	Tanjore	Tanjore	Ta	93	F
Trichinopoly	Karur	Karur	Kr*a*	7	F
"	"	"	Kr*b*	30	F
"	"	"	Kr*c*	35	F
"	"	"	Kr*d*	70	F
Ramnad	......	Kilakkarai	Ki*a*	48	F
"	......	"	Ki*b*	58	F
Madura	......	......	MdD*a*.	52	F
"	......	......	MdD*b*	53	F
"	......	......	MdD*c*.	61	F
"	......	......	MdD*d*	63	F
"	Madura	Madura	Md*a*	39	F
"	"	"	Md*b*	80	F
"	Tirumangalam.	......	TiT*a*	24	F
"	"	......	TiT*b*	62	F
"	Madura	Kaliyamputtur.	Kp	29	F
Tinnevelly	Sankarankoyil.	Karivalam-vandanallur.	Kv	86	F
"	Nanguneri	Malayadipudur.	Ma	83	F
Coimbatore	Coimbatore	Vellalur	Ve*a*	26	F
"	"	"	Ve*b*	59	F
"	"	"	Ve*c*	87	F
"	"	Kalikkanayak-kanpalaiyam.	Ka	79	F
"	Dharapuram	Kangayam	Ky	5	F
"	"	Kathanganni	Kg	76	F
"	"	Kulattuppalai-yam.	Ku	91	F
"	Palladam	Kallakinar	Kl	74	F
"	Pollachi	Pollachi	Po	3	F
"	......	Pennar	Pe	6	F
"	......	......	CoD*a*	4	F
"	......	......	CoD*b*	8	F
"	......	......	CoD*c*	22	F
"	......	......	CoD*d*	31	F
"	......	......	CoD*e*	75	F
Nilgiris	......	Ootacamund	Oo	10	F
Malabar	Kottayam	Kottayam	Ko*a*	28	F
"	"	"	Ko*b*	64	F
MYSORE	......	......	MyS	43	F
Bangalore	Bangalore	Yaswantpur	Ya	60	F
"	......	Bangalore	Bl	57	F
Chitaldrug	Chitaldrug	Chandravalli	Cv	73	F
PUDUKKOTTAH.	Alangudi	Karukkakuri-chi.	Kk	65	F
TRAVANCORE—					
Quilon	Chenganur	Puthenkavu	Pu	71	F

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GRAMMES AND GRAINS : EQUIVALENTS.

The equivalents in Grains are given correct to two decimal places. Where an equivalent, when worked to four decimal places, yields figures in the third and the fourth decimal places ranging from ·0051 to ·0099, the figure in the second decimal place in the equivalent is shown in italics.

Grammes.	Grains.	Grammes.	Grains.	Grammes.	Grains.	Grammes.	Grains.	Grammes.	Grains.
2·90	...	3·62	55·86	6·76	104·32	7·21	111·2*6*	7·53	116·2*0*
3·25	50·15	3·64	56·17	6·77	104·4*7*	7·22	111·42	7·54	116·3*5*
3·31	51·09	3·65	56·3*2*	6·78	104·63	7·23	111·5*7*	7·55	116·51
3·35	51·6*9*	3·66	56·48	6·79	104·78	7·26	112·0*3*	7·56	116·6*6*
3·38	52·16	3·67	56·3*3*	6·86	105·*86*	7·28	112·3*4*	7·58	116·9*7*
3·41	52·62	3·68	56·79	6·88	106·17	7·30	112·6*5*	7·60	117·28
3·42	...	3·70	57·0*9*	6·92	106·79	7·33	113·1*1*	7·62	117·59
3·44	53·0*8*	3·71	57·25	6·95	107·25	7·38	113·89	7·63	117·7*4*
3·46	53·3*9*	3·72	57·4*0*	6·97	107·56	7·40	114·1*9*	7·64	117·90
3·48	...	3·74	57·7*1*	7·02	108·33	7·41	114·35	7·66	118·21
3·49	53·*85*	3·75	57·87	7·05	...	7·42	114·5*0*	7·68	118·52
3·50	54·01	3·79	58·48	7·06	108·95	7·43	114·66	7·70	118·8*2*
3·52	54·32	3·80	58·64	7·07	109·1*0*	7·45	114·97	7·71	118·98
3·53	54·47	3·33	58·1*0*	7·10	109·5*6*	7·46	115·1*2*	7·72	119·1*3*
3·55	54·78	6·61	102·0*0*	7·11	109·72	7·47	115·1*7*	7·74	119·44
3·56	54·9*3*	6·67	102·93	7·13	110·03	7·48	115·43		
3·57	55·09	6·68	103·0*8*	7·14	110·1*8*	7·49	115·5*8*		
3·60	55·5*5*	6·73	103·*85*	7·17	110·6*4*	7·50	115·74		
3·61	55·71	6·75	104·1*6*	7·20	111·11	7·51	115·*89*		

[1] Sewell, (1904).

[2] For instance, the coins from Kaliyamputtur, P29 : K9.

[3] In 1906–7 ; see *MM. AR.*, 1907.

[4] Neither Bidie, who prepared the *Catalogue* of 1874, nor Thurston, who prepared that of 1894, noted down the provenance of the coins which they catalogued. Records of subsequent subtractions and rearrangements, down to about 1920, seem to have suffered the destruction which overtakes routine papers in Government offices.

[5] For details, see p. below.

[1] Stavorinus, iii. 11.

[2] Sewell.

[3] 'Some of which I have got in my possession.' Stavorinus, iii. 11.

[4] Davidson, in *Asiatic Researches*, (1790), ii. 331–2. ...

[5] Buchanan, ii. 318–9 ; he was the recipient of the gift. In 1875, Walhouse [(1875), 302] referred to 'a pot full of well-preserved coins of Augustus and Tiberius, which was dug up at Polachi, in Koimbatur, in 1810', and in 1894 Thurston [(1894), 8] mentioned this find, without, however, citing his authority. As we have no further reference to this find, we may take it that Walhouse's '1810' was a misprint for '1800' and that there was no second find at Pollachi.

[6] See the next entry.

[7] *NC.*, (1843–4), v. vi. 162.

[8] Elliot, (1844), 214. Elliot was then inclined to the belief that 'these were probably the same' as the coins of the Pollachi find of about 1800 (*Ib.*, 214). But in 1873 he held apparently that the finds were distinct, for he wrote that 'in 1800 a pot full of gold coins and in 1801 another of silver denarii, were found in different parts of the Coimbatore province' [*Ib.*, (1873), 241]. This is in consonance with the first of the notices above. We may therefore assume a find of gold coins in 1800 at some unknown spot in the Coimbatore region, a find of silver coins in 1801 at Kangayam, and, probably, one or more finds not otherwise known.

[8] If this 'province' is to be taken to be identical with the present 'district' it is not easy to identify this village.

[9] Elliot, (1888), 228.

[10] As noted by Col. Mackenzie on the sketches which he had had drawn of them. Elliot, (1844), 214.

[11] Elliot, (1844), 214 ; (1873), 242.

[12] *NC.* (1843–4), i. vi. 162.

[13] Bird, 296.

[14] An agent of Lieut.-Col. C. M. Mackenzie, who later became Surveyor-General of India.

[15] Wilson, (1828), ii. 248, 269.

[16] Sewell, (1882), i. 226.

[17] Prinsep, (1832a), 392.

[18] Prinsep, (1832a), 393.

[19] Wilson, (1832), 561.

[20] Wilson, (1832), 561.

[21] Prinsep, (1832a), 404.

[22] Prinsep, (1832b), 476.

[23] Prinsep, (1832a), 403 ; (1832b), 476.

[24] Prinsep, (1832b), 476.

[25] Prinsep, (1832a), 403 ; (1832b), 476.

[26] Prinsep, (1832b), 476.

[27] Prinsep, (1832b), 476.

[28] 'They belonged to Col. Mackenzie's Cabient.' Prinsep, 406.

[29] So, one of each emperor, *JASB.* (1833), ii. 368.

[30] Court, 558–9 ; Prinsep, (1834), 504–5 ; Cunningham, (1834), 635–7.

[31] These are now preserved in that Museum : M. i. 90, 526 (Corp.), which is there said to have been 'found at Coimbatore', and M. i. 126-51 (Corp. 154), to which no data about provenance are added.

[32] *NC.* (1843–4), i. vi. 162. In the absence of further particulars it is difficult to decide if these came from a find other than those noticed above as having been made in the Coimbatore area,—namely Nos. 3, 4, 5 and 7. The latest of these finds is twenty-one years before the gift, and is of a single coin. The other finds are thirty-five years earlier than the gift,— and one of them, No. 3, is also of a single coin. The probabilities are therefore against the coins of this gift having come from one of those finds.

[33] Elliot, (1844), 214–5.

[34] 'Of the type figured by Prinsep as No. 10 of his Ceylon series' ; *JASB.*, vi. 298 ; pl. 20.

[35] Elliot, (1844), 215. This is probably the coin that he referred to later as having been found at Madura : Elliot, (1873), 242.

[36] *NC.* (1843), i. v. 202, citing *Asiatic Journal*, April (1843), which itself cited *Bombay Gazette*, January 31, 1842.

[37] Elliot, (1844), 215.

[38] Elliot, (1873), 242.

[39] An obvious slip for 'Porambokе.'

[40] *NC.*, (1843–4), i. vi. 160–2.

[41] Walhouse, (1876), 239, where he subjoins a list of the types, he having examined them shortly after their discovery. His results agree with those of Elliot, cited above.

[42] Elliot, (1844), 212–4 ; see also Bird, 294.

[43] Elliot, (1844), 215.

[44] Elliot, (1873), 242.

[45] Elliot, (1885), 33.

[46] Drury, 382–3.

[47] Drury, 371–3.

[48] Caldwell, 47.

[49] *MM. AR.*, 1882.

[50] 'Extract of a letter from R. D. Parker, Collector of Madura.' *MJLS.* (1856–7), xvii. 114.

[51] *MJLS.* (1857–8), xix. 157–8. With reference to this find, Warmington, 280, says : 'Originally emperors were represented to Commodus.' No authority, however, is cited in support.

[52] 'A measure holds about three pints' ; Sewell, (1904), 636.

[53] Little, 338.

[54] These form the 'Marjoribanks Gift' to the British Museum in 1863, where the coins now are. The first is stated to have been 'found near Coimbatore' (M. i. 169. 32); the second is said to have been 'found near Coimbatore, 1863' (*Ib.* 173. 60), and the third is set down as having been 'found at Coimbatore' (*Ib.* 207. 49). Very probably these coins belonged to a find at or near Coimbatore and in or before 1863. The only previous find of Roman gold coins in the area being that of 1800 (No. 4 above) it is unlikely that these coins came from a find so far back in time.

[55] *ASI.R.* (1863–5), ii. 148.

[56] Elliot, (1873), 349. The coin went into his collection.

[56a]. They are found catalogued by Bidie.

[57] *ASI.R.* (1874–6), xiii. 72–3.

[58] Little, 219–226 : See also *MER.*, 1891 June : 1 : 2 and *MM.AR.*, 1893 : 6–7.

[59] Waterhouse, (1879), 77–9 ; Hoernle, (1879), 122, 134–5 ; pls. 2, 3.

[60] Hoernle, (1880), 218.

[61] Sewell, (1882), 190.

[62] Sewell, (1882), i. 285.

[63] Sewell, (1882), i. 291.

[64] Sewell, (1882), i. 291.

[65] Sewell, (1904), 609–10.

[66] *MM.AR.*, 1882 : 5.

[67] These were transferred to the British Museum in 1882. They are catalogued in M., and are also noticed below.

[68] *MM.AR.*, 1883 : 7.

[69] The description of the coin shows it to be one of Commodus.

[70] For this Museum.

[71] *MM.AR.*, 1883 : 6.

[72] Little, 338.

[73] Hoernle, (1886), 86–9.

[74] *MM.AR.*, 1886 : 4 : 23.

[75] An envelope in this Museum containing two denarii bears the superscription.

The coins had evidently been cleaned on their being received ; they lie separate, but bear traces of the resin. For our purpose the find may be treated as comprising two denarii, for they are of the same class.

[76] Situated 'on a piece of ground which slopes gently down for 100 yards or so from the base of the western telegraph hill to the banks of the Kistna river.'

[77] *ASI.SAR.*, 1888 (January 2), 2–4 : 5.

[78] *MM.AR.*, 1888 : 3–4 : 29.

[79] W. i. 74. This coin is mentioned under the heading 'Indian Imitations.'

[80] Cunningham (1889), 61.

[81] *See.*

[82] Wilson (1841), 44, 110, pl. xvi, xviii ; Smith (1889), 155–6.

[83] By P. C. Mukherjee who was 'on special duty with the Archaeological Survey of India.' Hoernle (1890), 169.

[84] Thurston (1899), 325–8.

[85] 'In the collection of the Rev. J. E. Tracy of Tirumangalam.'

[86] Tufnell, 29–30.

[87] Tufnell, 27–9.

[88] O. Codrington, 38.

[89] 'By Babu P. C. Mukherji, on special duty with the Archaeological Survey of India.'

[90] Hoernle (1890), 170.

[91] O. Codrington, 38.

[92] *MER.*, 1891, June : 1 : 2.

[93] *ASI.SAR.* 1890, Nov. : 1 : 4.

[94] *MM.AR.* 1891 : 8 : 13 ; Thurston (1891), 199–202 ; (1894), 24.

[95] *See* page.

[96] Rice, 1. See also Thurston (1894), 26–8.

'In the same locality in which the present coins were discovered, but in different places, have been found a flat rounded iron spear-head, 10 inches long and 3½ inches wide at the base ; also a metal spoon, much corroded, having a circular bowl 1½ inches in diameter, with the bottom gone ; and the handle, 8 inches long, apparently of some instrument. It is formed of a hard steel core with lumps of melted metal round it, and is thicker at one end than the other. These throw no light upon the depositor of the coins, unless it may be supposed that the latter were in possession of some traveller who was cooking his food, and were stolen from him by a robber armed with the spear. The thief may then have buried them as a temporary measure of safety and been prevented from ever coming back to recover them.' Rice, 2.

[97] By the Rev. J. E. Tracy. Thurston (1894), 29.

[98] They were in the collection of the Rev. J. E. Tracy. Thurston (1894), 29.

[99] By the Rev. J. E. Tracy. Thurston (1894), 29.

[1] *MM.AR.* 1897 : 6 : 10.

[2] This is generally referred to as the Pudukkottah hoard.

[3] Ten miles to the east of Alangudi, in the State.

[4] Of them were presented to the British Museum, London, by H.H. the Maharajah.

[5] More precisely 461 out of 501. For details of the find, *See* Hill (1898), 304–20, and Radhakrishna-Aiyar.

[6] Rodgers, 263–5.

[7] *MM.AR.*, 1899 : 5 : 9.

[8] *MM.AR.*, 1900 : 3 : 6.

[9] *MM.AR.*, 1902 : 6 : 6.

[10] Belonging to the collection of J. R. Henderson.

[11] Sewell (1904), 617.

[12] *MM.AR.*, 1904 : 5-6 : 9.

[13] Within the jurisdiction of the Sub-Magistrate of Ongole as it was then. *MM.AR.*, 1905 : 5 : 8.

[14] *ASM., AR.*, 1909, 31.

[15] *See.*

[16] *MM.AR.*, 1912 : 4 : 9.

[17] Cor. obviously.

[18] *MM. AR.*, 1913 : 6 : 8.

[19] *MM. AR.*, 1915 : 5 : 6. As it is added that 'numerous finds of these two denari have been made from time to time,' it has been assumed here that the coins of this find are of the varieties noted in the Corpus as Nos. and

[20] *MM. AR.*, 1915 : 4–5 : 6.

[21] *MM. AR.*, 1916 : 5 : 6.

[22] *MM. AR.*, 1917 : 4–5 : 8.

[23] *MM. AR.*, 1918 : 4 : 7.

24 *MM. AR.*, 1918 : 3 : 7.
25 *MM. AR.*, 1918 : 3 : 7.
26 *MM. AR.*, 1928 : 4. *Ac. 169.*
27 *MM. AR.*, 1930 : 6 : *Ib.*, 1931 : 2. Ac. 223.
28 *MM. AR*, 1933 : 5. Ac. 324.
29 *MM. AR.*, 1932 : 8–9. Ac. 295.
30 *ASN.*, 1933 : 7, 39. Details were kindly furnished by the Curator of the State Museum.
31 *MM. AR.*, 1935 : 5. Ac. 385.
32 *MM. AR.*, 1934 : Ac. 423. Two of the three bits having been found rolled up, the coin was at first believed to be a Venetian sequin, but when the bits were subsequently unrolled, it was recognized to be a Roman solidus.
33 *ASI.AR.*, 1935 : 29–30, 83.
34 *MM. AR.*, 1937 : 7. Ac. 471 (No. 1).
34a MS. iv-a. 134, 342.
35 From information kindly furnished by the Curator of the Curzon Museum of Archaeology, Muttra.
36 Pandit V. Prabhakara-Sastri of the Government Oriental Manuscripts Library at Madras.

1 F. 30 : Kr*b*.
2 F. 9 : Al.
3 Instances are F. 28 : Ko*a* and F. 90 : Na.
4 F. 28 : Ko*a*.
5 F. 5 : Ky ; F. 8 : CoD*b* ; F. 25 : Dh.
6 F. 50 : Ul*c* ; F. 38 : Mp*b* ; F. 42 : SpT. ;
7 F. 11 : Ul*a* ; F. 20 : Ul*b* ; F. 27 : 66 ; F. 40 : Sl*a* ; F. 43 : MyS ; F. 46*a* : In ; F. 50 : Ul*c* ; F. 69 : Sl*c*.
8 F. 2 : NeD ; F. 34 : Ba ; F. 42 : SpT.
9 See those to which the abbreviations D,T or S, have been suffixed.
10 F. 19 : Mp*a* ; F. 22 : CoD*c* ; F. 31 : CoD*d* ; F. 33 : Cu ; F. 38 : Mp*b* ; F. 52 : MdD*a* ; F. 62 : TiT*b* ; F. 69 : Sl*c* ; F. 75 : CoD*e*.
11 F. 38 . Mp*b* ; F. 44 : Mp*c*.
12 F. 1 : Su ; F. 10 : Oo ;
13 For details, see the Appendix : 'Distribution of Find-Places.'
14 The lines of demarcation are run along *lines of latitude* and *longtitude for* purposes of practical convenience. A pedantic adherence to the lines would have destroyed that convenience if the negligible strip of land to the south of Lat. 22 in the Cambay peninsula and the equally negligible strip to the south of the same line in Bengal were treated as falling into regions distinct from the ones to which, by common sense, they pertain. The pedantry has therefore been avoided.
15 A closer division is possible and will be even more helpful, but it cannot be satisfactorily attempted till our knowledge of the various considerations that we ought to weigh should become fuller and clearer.
16 F. 36 : Ja ; F. 49 : Hi ; *F. 66* : Pa.
17 F. 1 : Su ; F. 19, 38, 44 : Mp ; F. 9 : Al ; F. 85 : Mb ; F. 48, 58 : Ki.
18 For example : F. 12, 13 : Kj ; F. 94 : Mu ; F. 54 : Nd ; F. 56 : Wa ; F. 34 : Ba ; F. 47 : Vi ; F. 65 : Kk.
19 F. 15 : Ab.
20 F. 37 : Re.
21 F. 89 : Ga.
22 F. 33 : Cu.
23 F. 90 : Na.
24 F. 73 : Cv.
25 F. 4, 8, 22, 31, 75 : CoD.
26 Mysore, Travancore and Pudukkottah.
27 F. 65 : Kk.
28 F. 2 : Ne.
29 F. 8 : CoD*b*.
30 *F. 21 : Mka ; F. 36 : Ja ; F. 49 : Hi ; F. 92* : Tx.
31 F. 37 : Vi.
32 F. 2 : Ne.
33 F. 86 : Kv.
35 Prinsep.
36 See
37 Sewell, (1904), 621.
37a *For instance, see F.* and *F.*
38 F. 16 : Mi*a* : Cor. 502.
39 It is indeed unfortunate that indefiniteness should mark the available records relating to a number of finds : F. 11 : Ul*a* (many) : F. 12 : Kj*a* ; F. 13 : Kj*b* ; F. 14 : Ch ; F. 15 : Ab ; F. 17 : Mi*b* ; F. 18 : Bi ; F. 40 : Sl*a* F. 61 : MdD*c* ; F. 42 : SpT.
40 F. 1 : Su.
41 F. 20 : Ul*b*.
42 By me in 1936.
43 F. 93 : Ts : Cor.
44 F. 42 : SpT.
45 F. 53 : Md.
46 F. 19 : Mp*a* : Cor.
47 F. 44 : Mp*c* : Cor. 552.
48 F. 9 : Al.
49 F. 48 : Ki*a* ; F. 58 : Ki*b*.
50 F. 27.
51 F. 39 : Md*a*.
52 F. 51 : Vk.
53 F. 90 : Na.
54 F. 29 : Kp.
55 Cor.
56 Cor.
57 Regions E and F. The finds are : F. 65 : Kk ; F. 80 : Md*b* ; F. 82 : To ; F. 84 : Gu ; F. 86 : Kv ; F. 90 ; Na. Possibly ; F. 29 : Kp, also.
58 F. 82 : To : Cor.
59 F. 80 : Md*b* : Cor.
60 F. 90 : Na ; Cor.
61 F. 65 : Kk : Cor.
62 F. 86 : Kv : Cor.
63 F. 84 : Gu.
64 F. 80 : Md*b*.
65 F. 65 : Kk.

66 Cor. 110, 166, 271, 283.
67 Hill, (1898), 320.
68 Hill, (1898), 319.
69 First suggested by Hill, (1898), 319, but withdrawn by him, (1899), 82; adopted by Warmington, 280.
70 For instance, Cor. 196, 217, 218, 247, 330, 334, 347, 447, 459, 473.
71 Theobald, 81.
72 Cor. 310.
73 Hill, (1899), 82.
74 F. 84 : Gu : Cor. 534.
75 F : : Cor.
76 Hill, (1898), 319-20.
77 Hill, (1899), 82. An exception is, however, supposed to have been made in the case of coins 'meant to be dedicated at some shrine,' and confirmation of this view is sought in the assumption that coins found in the hoards in 'topes' are not defaced: Hill, (1898), 320. The assumption does not seem to be well-founded: the Nellore hoard was preserved in a pot buried beneath 'the remains of a Hindu temple,' but some of the coins were defaced: F. 2 : Ne.
78 Theobald, 82.
79 Cunningham, (1890), 53, pl. 9 (1).
80 Smith (1906), 94.
81 Smith (1906), 65.
82 Head, (1875), 282–5, pl. 10 (8).
83 About 1887: Greenwell, 1, 9.
84 Greenwell, 1, 7, 9.
85 Greenwell, 1–2.
86 Greenwell, 2, 9, 11; pl. 1 (1, 4, 5, 7).
87 Greenwell, 11, pl. 1 (7).
88 Greenwell, 2, 9, 11; pl. 1 (4, 5).
89 Greenwell, 9; pl. 1 (1).
90 Robinson, 93–106.
91 Robinson, 94.
92 Robinson, 94.
93 Robinson, 94.
94 Robinson, pl. 8 (1, 5, 16, 18, 19, 29, 33), for instance. The defacement of the dump, one out of sight, might have been accidental.
95 Newell, 1–33.
96 Newell, 29.
97 Newell, 22.
98 Newell, 31.
99 Newell, 31–2.
1 Robinson (1930), 1, 4; pl. 1 (10).
2 Six, (1885), 26–7; pl. 2 (8, 9); *NC.* (1895), 170, pl. 7 (15).
3 Six, (1885), 27; pl. 2 (10).
4 Seltman, 121.
5 Six, (1884), 156, pl. 5 (3).
6 Six, (1884), 156, pl. 5 (4).
7 Six, (1884), 129, pl. 6 (3).
8 Hill (1923), 231–2, pl. 10 (40).
9 Six (1884), 132, pl. 6 (6).
10 Macdonald (1909), 48, pl. 4 (1).
11 *See* Corpus under Cor. 78–100.
12 Hill, (1909), 171, who appears to rely on a statement of Mommsen in his *Historia de la Monnaie Romaine* (trans. Blacas), iii. 337–8; *cf.* the ambiguous words of Warmington, 39.
13 I have handled about specimens belonging to this Museum, which have been set apart for sale as being superfluous. Presumably these came from the 1932 find at Vellalur, F. 87 : Vec. Most of them being badly corroded or being broken, it is easy to say whether they were 'plated.' None of these pieces has been subjected to this process.

Warmington, 388 (footnote 49), says that 'in the Coimbatore district 131 of them have been noticed,' but he cites no authority. I have found none in the literature known to me.

None of the pieces from India which are preserved in the British Museum is noted as being plated: M. i. 89–91.
14 Hill (1909), 171.
15 The literature available here makes no mention of them. This Museum has none such. The pieces in the British Museum are not stated to have come from India: M. i. 89, note *
16 Mommsen, *op cit.*, iii. 337–8, cited by Hill (1909), 171.
17 Warmington, 39, *relying on Ernst.*
18 Mattingly (1928), 182.
19 M. i. Intr. 114.
20 M. i. Intr. 44–5. 'The existence,' in European collections, 'of masses of plated coins of the Emperors, from Augustus to Nero,' is not unknown: Mattingly (1928), 135; *cf. Ib.*, 189.
21 M. i. Intr. 45.
22 Hill (1909), 171. Warmington, 292, accepts this view and states that 'the Romans . . . tried the effect of bad coins, for instance the plated examples of Gaius and Lucius, upon uncultured minds,' and 287, citing Chwostow, 'attributes the abundance' of these coins 'to a natural trust placed by the uncultured Indian in the good Roman coinage of that age.'
23 Theobald, 182.
24 Theobald, 182.
25 Theobald, 183, f.n.
26 Cor. 6.
27 Cor. 151.
28 Cor. 409.
29 F. 68 : Ks.D. : Cor. 433.
30 F. 37 : Re.
31 Cor. 449.
32 Cor. 457 (*a*).
33 F. 81 : Up.
34 Cor. 418.
35 Cor. 460.
36 F. 57 : Bo. : Cor. 487.

[37] F. 84 : Gu. I owe the identification of a majority of them to Mr. H. Mattingly. In my anxiety to clarify the issues raised by the hoard, I have presumed to venture identifications of the originals of a few other pieces.

[38] Cor. 461, 463.

[39] F. : SI*e*. : Cor. 453.

[40] F. 83 : Ma.

[41] Cor. 583 (*a*).

[42] F. 46*a* : In : Cor. 588.

[43] F. 81 : Up. : Cor. 418.

[44] Cat. 169 ; Cor. 463.

[45] See, for instance, the remarks of Wroth on F. 46 *a* : In, of Rapson on F. 68 : KsD, of Mattingly on Cor. 151, and of Mattingly and Sydenham on F. : In, and also the account of F. 81 : Up.

[46] The appearance of the hybrid piece Cat. 155 : Cor. 409, suggests that it was manufactured in a region where the Roman characters at least were clearly understood.

[47] Cor. 409 : Cat. 155.

[48] It will be noticed that this weight is quite close to the standard of 7.39 gm. established by Nero, about a century earlier ; (Mattingly, 124). Probably, the coins of Nero or Vespasian, which must have been current along with those of Antoninus Pius were those chosen for imitation in respect to weight.

[49] This weight was taken as the standard in 215 A.D. ; MS. iv. i. (vi).

[50] 123.2 grains ; Cunningham (1888), 20. This standard is quite close to that of Augustus, 7.96 gm., (Mattingly, 123), and higher than that of his successors. The Kushans must be taken to have adopted the Augustinian standard, if we agree that their coinage had Roman affinities.

[51] Perhaps the region in which the piece was fabricated could be ascertained with precision if we could determine where the title CAESAR could have been transmuted into CAIESAR, the form it bears on this piece.

[52] Cor. 433 : Cat. 160.

[53] But see p. below, where a more probable date is offered for it.

[54] F. 81 : Up.

[55] Cor. 460 : Cat. 166.

[56] Cor. 463 : Cat. 169, for instance, which is assignable to 202–10 A.D., is exactly of this weight,—6.88 gm.

[57] MS. iv. i. (vi).

[58] Cor. 418 : Cat. 157.

[59] F. 84 : Gu.

[60] Cor. 469 : Cat. 171–6.

[61] The analyses below should be enough :—

ACCORDING TO WEIGHT AND DATE.				ACCORDING TO CONDITION AND DATE.			
WEIGHT.	DATE OF ISSUE.	CONDITION.	CAT. NUMBER.	CONDITION.	DATE.	WEIGHT.	CAT. NUMBER.
6·95	205	Ws H_2	172	Fs	205	6·78	174
,,	196–7	Ws H_2 C_1	165	W Cs	,,	6·73	173
,,	180	,,	163	Ws	,,	6·79	176
6·92	202–10	Ws H_2	170	,,	,,	6·67	171
6·88	202	Wv H_2 C_1	168	Ws H_2	206	6·58	178
6·86	195–7	Wv H_2	164	,,	,,	6·55	177
6·79	205	Ws	176	,,	205	6·95	172
6·78	,,	Fs	174	,,	,,	6·76	175
6·77	211	Wv H_2 C_1	181	,,	202–10	6·92	170
6·76	205	Ws H_2	175	Ws H_2 C_1	210–11	6·75	179
6·75	210–11	Ws H_2 C_1	179	,,	196–7	6·95	165
,,	175–6	Wv C_1	162	,,	180		163
6·73	205	W Cs	173	Wv H_2 C_1	211	6·77	181
6·67	,,	Ws	171	,,	202	6·88	168
6·58	206	Ws H_2	178	Wv H_2	195–7	6·67	164
6·55	,,	,,	177	Wv C_1	175–6	6·58	162

[62] Cat. 171–6 : Cor. 469.

[63] Cor. 469 : Cat. 171 and 176, the weights being 6.67 gm. and 6.79 gm. respectively.

[64] Cor. 469 : Cat. 172 and 175, the weights being 6.95 g.m. and 6.76 gm. respectively.

[65] Cor. 469 : Cat. 174, the weight being 6.78 gm.

[66] Cor. 529 : Cat. 184 and Cor. 534 : Cat. 186.

[67] 7.05 gm. and 7.70 gm. respectively.

[68] The weights answer, however, very roughly to the standards adopted by the Sassanians, 7.30 gm., 7.20 gm. and 7.06 gm. under Sapor II, 309–79 A.D. (Morgan, 312–3) : Whether the Sassanian standards had any influence on the weights of these imitations is a point that seems to require consideration.

[69] A similar attempt in respect of other pieces could not be made for want of data regarding the weights and the standards.

[70] The imitation of the Sabina aureus, Cor. 418 : Cat. 157, would appear to be about sixty years later than the original, but it may be that the original is a piece issued in honour of a lady of the imperial line later than Sabina.

[71] Cor. 6 : Cat. 1.

[72] F. 84 : Gu.

[73] Cor. 461 : Cat. 167, and Cor. 463 : Cat. 169, covering the period from 206 to 210 A.D.

[74] Mr. H. Mattingly. See p. above.

[75] See the Table above.

[76] They are :

(*a*) IVI on Cat. 162, 165, 170, 179, 181, 168.
(*b*) IVI and VI on Cat. 162, 170.
(*c*) VI on Cat. 164, 165, 181, 168.
(*d*) VICI on Cat. 170, 181.
(*e*) VIG on Cat. 165, 168.
(*f*) IOV on Cat. 163, 164.
(*g*) IOVI on Cat. 165, 170.
(*h*) IOIVI on Cat. 170.
(*i*) -IO-on Cat. 171.

[76] On Cat. 162 and 179, PIV suggests PIVS ; so also, VIG on Cat. 165, VIIG on Cat. 165, 179, and VIIIC on Cat. 162, suggest AVG.

[77] Undoubtedly a slight corruption of SEVERVS PIVS AVG ; on Cat. 168.

[78] Cat. 168.

[79] Cat. 162, 165, 179.

[80] Cat. 170, 181.

[81] The coins of this hoard were examined very kindly by H.R.H. Prince Peter of Greece, during his stay here in 1939, and it is he who suggested the possibility of these two pieces bearing legends smacking of Greek. He desired that the suggestion may be treated as quite tentative.

[82] Cat. 163

[83] On the reverse : ΠΟΥΝΙΟC.

[84] Cat. 164.

[85] On the obverse, Ǝ, and on the reverse w.

[86] That on the obverse.

[87] In the sketch on p. . . the legend has been transcribed as if it ran the usual course, as indicated by arrow 1 in the sketch of the coin in pl. . . ., but this is unsatisfactory as it yields no sense and points to no normal original. Further, the directions in which the limbs of E turn,— occurring as the character does in both the right and the left halves of the legend,— are reasonably clear indications of the directions in which the halves should be respectively read. If the left half is then taken to run as shown by arrow 2, we get ΛREΛIΛΛ , which may well be a corruption of AVRELIAN, the name, or at least a part of the name, of a Roman emperor, provided, however, that we take it that the Latin V was copied upside down and that the legend exhibits a mixture of Latin and Greek characters, the Λ of Greek doing duty for the Latin L. If the right half is taken to run in the direction of arrow 1, we get VZEVIVV, which may be a corruption of the Greek word ΒΑΞΙΛΕΩΝ, the Greek equivalent of 'Emperor,' the A and the Λ being written upside down, and the Ω being found in the square form found at least on some Indo-Bactrian coins (Gardner, 1886, xlvi). It is curious that if this half of the legend is read with the coin held against a mirror, we get ΛΞ ΕΛΙΑΛ, which too may be a corruption of the same word, the A and the Λ being found in this case written proper side up. It is also curious that even if we ignore the indication of direction furnished by the limbs of E and read the left half in the direction of arrow 3 we get VREVIVV, which may be a corruption of AVREΛIAN, the Greek Λ and A being copied topsy-turvy. We seem to have therefore substantial grounds for believing that the coin bears a legend that is a corruption of AVREΛIAN ΒΑΞΙΛΕΩΝ, which itself seems to be a hybrid of Greek and Roman elements.

[88] PIVS and AVG are suggested by PIVA and AV respectively, on Cat. 177, 178. PIVS AVG is suggested by IVISVIC on Cat. 174–6, and by the further debasements,—IVIIWC on Cat. 171, and VIIWC on Cat. 172.

[89] Sub-class III (*a*).

[90] Batches 1 and 2 of sub-class III (*a*).

[91] Cat. 171.

[92] Cat. 172.

[93] Cat. 173–6.

[94] The readings that could be risked are :

(*a*) Ta Ma Na-Sa Pa PuNaTaPa Na VaNa.
(*b*) Ta Ma Na-Sa Pa SaNa-U Na VaNa.
(*c*) Ta Ma Ha-Sa Pa DaLa-U Na VaNa.
(*d*) Ta Ma Ha-Sa Pa U La-U Na VaNa.

Permutations and combinations of the varying elements in the above readings may also be ventured upon, but they would seem to take us no further.

[95] Cat

[96] Cat

[97] The possible readings are DaDa and DaDa.

[98] Cat.

[99] Compare the obverse legends of sub-class II (*a*) with the legend on the obverse of Cat. 162 of class I. It is not to be missed that ATVIIII and ATVIII are quite close to ATVIIVI, and that IVIIWC, VIIWC, IVISVIC are, along with PIVIIIC, debasements of PIVS AUG, though the corruptions differ in degree.

[1] Compare the same obverse legends with the legend on the obverse of Cat. 168 : ATVIIII and the like are obviously related to AITAVII, and IVIIWC is similarly related to IVIVIVA.

[2] Compare the legends of sub-class II with the legend on Cat. 179 of class I. The VIVTAV of the former sub-class is a precursor of the IVIITI or NIITI of the latter class : so also does the PIVATVI of the former seem to be a predecessor of the PIVNIIG of the latter

[3] The possible readings are : DeNo S.PoKu and DeNo SaPoRu.

[4] Rapson (1908), cviii-cix, cxciv

[5] 'For instance,' of Apollodotus Philopator, *c.* 150 B.C., Rapson (1908), cxciv.

[6] Rapson (1908), cxci-cxcii. Three of the variations in the legends of Nahapana may be illustrated.

PANNIW IAHAPATAC NAHATANAC.
PANNI.VIANBAAA-CCENAAPNAACCE.
. . . WIA BAAΛ CCCΛ . APNA . . .

These have been copied from Scott, 228–9, where, however, a much larger number is illustrated. The use of the Roman H and the transformation of Greek T into Roman P, even though the Greek P does not give place to R, its Roman equivalent, may be noted : Scott, 230.

The legend on Castana's issues has been restored thus :

PANNIWIAT P [———] CIACTANCA.

The legend has not so far been found complete on any specimen : Rapson (1908), cxcii. 'But enough is known to show that it was probably an accurate transliteration' : Scott, 230.

[7] Rapson (1908), 78, note 1.

[8] Rapson (1908), cxcii.

[9] Such as 'AVG, COS III, etc.' : Rapson (1908), cxciv.

[10] Rapson (1908), cxciii.

[11] Rapson (1908), cxciii.

[12] Rapson (1908), cxciv. Some of the gradations may be illustrated by the following selection of legends, copied from Rapson (1908), cxcii-cxciii.

[13] That is, if the word ⲯOYNIOC could be read on Cat. 163, and the words AVREΛIAN BAEIΛEΩN could be taken to occur on Cat. 164 (See p. above).

[14] They are c, I, Λ, V and O.

[15] For the moment the presence of the Brahmi numerals is ignored. The occurrence of Λ in these legends would seem to suggest the presence of a Greek letter in the legends, but it may be only a corruption of the Latin A.

[16] *See* Scott.

[17] Rapson (1908), cxciv.

[18] Such as 'AVG, COS III, &c.'; Rapson (1908), cxciv.

[19] *I am loth to differ from Rapson, but I do not see any corruptions of AVG and COS III in the transcripts of* the legends published by him. *See* Rapson (1908), cxcii–cxciii.

[20] Scott, 234.

[21] Scott, 231, 232.

[22] Scott, 232.

[23] Scott, 224; indeed, 'hardly more than a dozen' were 'illegible' out of a total of 'about 13,250.'

[24] Sub-class III (*b*).

[25] Sub-class III (*a*).

[26] See p. above.

[27] Cat. 173; see p.

[28] What is legible of it may be read thus: V V VIICVI.

[29] This legend (on Cat. 173), is transcribed in the Table on p. , and may be compared with the Brahmi-like legends transcribed immediately above it. It will be noticed that the last four letters of the Graeco-Roman legend (Cat. 173) correspond exactly to the last five of the Brahmi-like characters (Cat. 171, 172).

[30] The second character in the legend transcribed immediately above this in the Table on p. ,

[31] The character immediately following the second hole in the legend transcribed immediately above this in that Table.

[32] For the alphabets, see, for instance, Morgan, 149, 198.

[33] The accompanying sketch demonstrates how near in shape some of the characters in those two alphabets are to the characters which we have so far assumed to be in Brahmi. The top line of the sketch reproduces the legend as it appears on our pieces: the middle line shows the graphic equivalents in Arsacidean Pahlavi, and the bottom one gives the Elamitic equivalents.

[34] Cat. 184.

[35] See pp. . The characters into which the legend on this piece has been corrupted may be read roughly as [A] ZIKK KMZ [KA] in the Characenian alphabet of about the same age. See, for instance, Morgan, 213.

[36] Cat 186.

[37] See p. above.

[38] The legend may then be read D[M]HA[R]; see Morgan, 198.

[39] The obverse legends on the pieces of the third class resemble the legends on both faces of the pieces of the first. A portion at least of the legend on the reverse of one of the coins of the second class resembles the legends on those of the first and third classes. The reverse legend on the coins of the third class are probably in the same characters as the obverse legend on the coin of the fourth, and the reverse legend on the coins of the third class have been shown to be derived from a legend which is fundamentally akin to the other legends on the first and the third classes.

[40] As under Zenobia and Vabalathus.

[41] Morgan, 236–7.

[42] Morgan, 178–87.

[43] Cat.

[44] To the coins of the Gumada hoard we may add another coin found in India: Cor.

[45] See pp.

[46] Aravamuthan (1938), 42.

[47] Class II: Cat. 163, 164.

[48] Cat. 164. See p. I should repeat that Prince Peter of Greece indulged in the speculation as a mere exercise *in intellectual gymnastics and that he rejected the probability of the reading.*

[49] The reading was obtained, as may be remembered, by reading a part of the legend in the counter-clockwise direction. A similar phenomenon may be noticed on some of the coins of Orodes I and Phraates, two Arsacidean princes of Elam.

[50] The combinations are:

IOVI—on Cat. 165, 170.
IOIVI—on Cat. 170.
IOV—on Cat. 163, 164.
IO—on Cat. 179.

The characters which on Cat. 163 were read as ⲯOYNIOC may be IIOYNIOC, which, gives us a corruption of characters that would make up the name of Julius.

[61] The legends are:

IOVΛIAN.	A ΓPIⲯINAN.	Morgan, 179.
TIBEPIOC.	IOVΛIOC.	BACIΛEVC PHCK ⲯ OPIC. Morgan, 180.
TIBEPIOC.	IOVΛIOC.	BACIΛEYC CAYPOMATHC. Morgan, 181.

[62] See p.

[63] The legend is [A]XOƎN[N—], and appears on a copper piece: Rapson (1908), 75. It is curious that if the coin is held against a mirror the greater part of the legend runs in the normal direction, [—N]NEOX[A].

[64] The legends are CTOXↃ and UↃ TOXE[O] and appear on copper pieces: Rapson (1908), 76.

[65] Rapson (1908), 75, 76.

[66] The appearance of a legend that is probably in Greek [BAΣ]?)IΛEΩΣ on an issue of Bhumaka, the predecessor of Nahapana, [see Rapson (1908), 64], is not really an objection to this conclusion, *for it* may have also come from the lands to the west of Persia and in the wake of the Roman legends, as Greek legends were much more common in that region.

[1] Sewell (1904), 593.

[2] Warmington, 88–9, *for instance*, refuses 'to maintain with Sewell that the Indian traffic grew less' under Vespasian, and holds that 'Indian commerce' was carried on unchecked in the age between the death of Nero and the death of Domitian. He adds, 116, that 'far from believing that a decline of trade took place after the reign of Nero', *he is 'convinced* that the trade was more prosperous than ever.'

[3] F. 66: Pa.

[4] Sewell (1904), 593–4; Warmington, 39.

[5] Even Warmington, 284–5, 301, who holds that Rome deliberately exported currency 'in order to create in India a gold and a silver currency of a Roman type' has to admit that the theory cannot hold good for parts other than the Tamil country.

[5] F 36 : Ja ; F 45 : Mk*b*.
[6] F 49 : Hi.
[7] F 36 : Ja ; F 49 : Hi.
[8] F 45 : Mk*b*.
[9] F 21 : Mk*a* ; F 92 : Tx.
[10] F 73 : Cv.
[11] F 8 : CoD.
[12] F 6 : Pe.
[13] F 85 : Mb.
[14] The weight of the aureus was reduced from 7·96 gm = 122·9 *gr.*; to 7·39 gm = 114·10 *gr.*; Mattingly (1928), 123, 124.
[15] Mattingly (1928), 124.
[16] Mattingly (1928), 125.
[17] Mattingly (1928), 138.
[18] Mattingly (1928), 125.
[19] Mattingly (1928), 138–9.
[20] Mattingly (1928), 139.
[21] Mattingly (1928), 138–9.
[22] Mattingly (1928), 125.
[23] F 65 : Kk.
[24] F 80 : Md*b*.
[25] F 29 : Kp.
[26] F 89 : Ga.
[27] F 90 : Na.
[28] F 51 : Vk.
[29] F 28 : Ko*a*.
[30] F 86 : Kv ; F 72 : OnT ; F 78 : Ml.
[31] F 66 : Pa.
[32] Indeed, no coins are included which were issued between 16–37 A.D. and 119–25 A.D.
[33] Pakli is in region A ; Gaiparti and Vinukonda are in region E ; the rest fall in region F.
[34] See p. above.
[35] F 82 : To ; F 80 : Md *b* ; F 90 : Na.
[36] F 65 : Kk.
[37] F 86 : Kv.
[38] F 84 : Gu.
[39] F 65 : Kk.
[40] See p. above.
[41] F 86 : Kv.
[42] For the rate of wear see p below.
[43] F 84 : Gu.
[44] Cat 162 : Cor.
[45] Cat 163 : Cor.
[46] Cat 165 : Cor.
[47] Cat 168 : Cor.
[48] Cat 179 : Cor.
[49] Cat 181 : Cor.
[50] See p above.
[51] Cat 184 : Cor 529, and Cat 186 : Cor 534.
[52] See Table in p.
[53] F 82 : To.
[54] F 80 : Md*b*.
[55] F 86 : Kv.
[56] F 84 : Gu.
[57] F 65 : Kk.
[58] See pp. above.
[59] F 90 : Na.
[60] Aravamuthan (1938), 1, 2, 8, 12–13, 41–42.
[61] Aravamuthan (1938), 15.
[62] Aravamuthan (1938), 15.
[63] Aravamuthan (1938), 41.
[64] Warmington, 54.
[65] A few of the finds may be mentioned : they are all of silver.

Chantenay :	167 yrs. :	*c.* 196–172 B.C. to 31–29 B.C.	G. ii. 5–6 ; M. i. (76).
Beauvoisin :	190 yrs. :	*c.* 217–197 B.C. to 29–27 B.C.	G. ii. 6 ; M. i. (76).
Palazzo Canavese :	179 yrs. :	*c.* 196–173 B.C. to 18–17 B.C.	G. ii. 47 ; M. i. (76).
Bourgeuil :	184 yrs. :	*c.* 200 B.C. to 16 B.C.	M. i. (76).

[66] The Terranova Pausania find, also of silver : 238 yrs. : *c.* 3rd cent. middle, B.C., to 12 B.C. G. ii. 48 M. i. (76).
[67] The Rheingonheim find : 234 yrs. : *c.* 174 B.C. to 79–70 A.D. M. i. (77).
[68] Mattingly (1928), 139, 186.
[69] F 90 : Na, from 8 B.C. to 145–61 A.D.
[70] F 51 : Vk, from *c.* 16–37 A.D. to 210–3 A.D.
[71] F 28 : Ko*a*, from 31–29 B.C. to 215 A.D.
[72] F 84 : Gu, from 175–6 A.D. to 330 A.D.
[73] F 49 : Hi, from 378–95 or 408–50 A.D. to 457–74 A.D. ; F 83 : Ms, from 408–50 A.D. to 491–518 A.D. ; F 71 : Pu, from 408–50 A.D. to 518–27 A.D.
[74] F 66 : Pa, from 124–103 B.C. to 119–25 A.D.
[75] F 26 : Ve*a*, from 15–12 B.C. to 54–55 A.D.
[76] F 20 : Ul*b*, from 238 A.D. to 450 A.D.
[77] F. 23 : At : Cor. 400 ; F. 44 : Mp*c* : Cor. 552.

[78] F. 33 : Cu : Cor. 394.
[79] F. 94 : Mu : Cor. 472.
[80] F 10 : Oo : Cor. 602.
[81] F. 54 : Nd : Cor. 444.
[82] F. 56 : Wa : Cor. 466.
[83] F. 16 : Mia : Cor. 502.
[84] F. 64 : Ko*b* : Cor. 554 *a*.
[85] F. 6 : Pe : Cor. 30 ; F. 8 : CoD*b* : Cor. 28.
[86] F. 85 : Mb : Cor. 153.
[87] F. 73 : Cv : Cor : 82.
[88] F. 92 : Tx : Cor. 125.
[89] The dates of issue of these coins are here deemed, for the moment, to be the dates of their arrival in India.
[90] F. 21 : Mk*a*.
[91] Prinsep, (1834), 563–4.
[92] Court, 559.
[93] Cunningham, (1889), 78.
[94] Cunningham (*1888*), 21.
[95] F. 24 : Kl.
[96] F 82 : To.
[97] F 36 : Ja.
[98] Hoernle, (1879), 122.
[99] F 37 : Re.
[1] Hoernle, (1880), 118.
[2] *Hoernle*, (*1880*), 118.
[3] F 49 : Hi.
[4] F 24 : TiT.
[5] F 20 : Ul*b*.
[6] F 65 : Kk.
[6a] F 66 : Pa.
[8] See.
[9] See.
[10] See.
[11] F 51 : Vk.
[12] F 89 : Ga.
[13] F 28 : Ko*a*.
[14] F : Ml.
[15] F 72 : OnT.
[16] F 81 : Up.
[17] F 25 : Dh.
[18] F 84 : Gu.
[19] F 49 : Hi.
[20] F 80 : Md*b*.
[21] F 82 : To.
[22] F 65 : Kk.
[23] Cor. 220.
[24] Cor. 243.
[25] Cor. 128.
[26] Cor. 338.
[27] Cor. 292.
[28] Cor. 128.
[29] Cor.
[30] F 90 : Na.
[31] F 2 : Ne.
[32] F 80 : Md*b*.
[33] F 84 : Gu.
[34] F 86 : Kv.
[35] Warmington, 41.
[36] Warmington, 41.
[37] Warmington, 41–2.
[38] Warmington, 42.
[39] F 5 : Ky ; F 3 : Po ; F 77 : Kt ; F 35 : Krc ; F 47 : Vi ; F 76 : Kg.
[40] The number might indeed be much larger, for we do not know how many coins the Kangayam and the Pollachi finds consisted of.
[41] Cor. 119–157.
[42] Cor. 119–126.
[43] Cor. 143–146.
[44] Cor. 127–142.
[45] See p. , lower down.
[46] F 82 : To ; F 60 : Ya.
[47] F 26 : Ve*a* ; F 59 : Ve*b*.
[48] Cor. 119–146.
[49] M. i. Intr. 78.
[50] M. ii. (22).
[51] M. i. (78).
[52] M. *ii*. (23).
[53] M. i. (78).
[54] F 66 : Pa.
[55] F 21 : Mk*a*.
[56] Prinsep (1834), 565, pl. 34 ; Cunningham (1834), 636.
[57] See p. above.
[58] F 90 : Na.
[59] That in the nature of things this can be only a rough estimate must be *steadily* borne in mind. Allowance should be made for the phenomenon of an earlier coin not having passed from hand to hand so frequently as a later one : the circulation of the former might have been slow while that of the latter might have been brisk. Examples of this phenomenon will be found in the finds at Kallakinar (F 74 : Kl) and Nandyal (F 90 : Na) and in one of the Madura finds (F 80 : Md*b*).

[59] F 90 : Na.
[60] F 10 : Oo ; F 56 : Wa ; probably F 54 : Nd, as well.
[61] As in the pieces selected for being deposited in stupas : F 92 : Tx.
[62] As in the cases in which a denarius was found mingled up in a mass of punch-marked coins of silver ; see p. above.
[63] *As in the cases probably of F 23 : At, and F 94 : Mu.*
[64] F 21 : MK *a*.
[65] Cor. 3, 14, 16, 20.
[66] Cor. 4, 5, 19.
[67] The Kushan copper pieces found with these coins were 'completely corroded with verdigris' and were 'mostly corroded,' but they were still legible enough to permit of their being figured roughly and identified, see Court, 559, and Prinsep, (1834), 564. While the wear that a coin suffers is generally translatable in terms of time, the corrosion *that it suffers is not so convertible, as the corrosion of a coin is due, not to use, but to disuse and to factors other* than those connected with lapse of time. The conclusion in regard to the date of the immurement of these coins is not therefore susceptible of being checked by reference to the extent *to which the Kushan copper pieces have got* corroded.
[68] F 74 : Kl.
[69] F 77 : Kt ; F 67 : Sa ; F 47 : Vi ; F 35 : Krc.
F 5 : Ky ; F 76 : Kg ; F 3 : Po.
[70] All but F 47 : Vi.
[71] F 47 : Vi.
[72] F 67 : Sa.
[73] Warmington, 39.
[74] Warmington, 78–9.
[75] Warmington, 274.
[76] Warmington, 287, citing Chwostow.
[77] F 47 : Vi.
[78] F 35 : Krc.
[79] F 5 : Ky.
[80] F 3 : Po.
[81] F 77 : Kt.
[82] F 76 : Kg.
[83] It need hardly be added that it is assumed that other factors, such as the hardness of the coins, are identical.
[84] F 3 : Po.
[85] Walhouse's observation.
[86] F 47 : Vi.
[87] F 76 : Kg.
[88] Cor. 87, 94, 98.
[89] F. 60 : Ya.
[90] F. 7 : Kra.
[91] F. 82 : To.
[92] F. 26 : Vea ; F 59 : Veb.
[93] F 65 : Kk.
[94] F 80 : Md*b*.
[95] F 29 : Kp.
[96] F 86 : Kv.
[97] F 72 : OnT.
[98] F 66 : Pa.
[99] F 36 : Ja.
[1] F 89 : Ga.
[2] F 45 : Mk*b*.
[3] F 2 : Ne.
[4] F 78 : Ml.
[5] F 90 : Na.
[6] F 25 : Dh.
[7] F 28 : Koa.
[8] F 51 : Vk.
[9] Cor. 413.
[10] F 20 : Ulb.
[11] F 71 : Fu.
[11a] Cor 6.
[12] Cor 151.
[13] Cor 409.
[14] F 68 : KsD.
[15] See p ☐ above.
[16] MS. v 1. 250–1.
[17] F 37 : Re.
[18] F 81 : Up.
[19] See p ☐ above.
[20] F 65 : KsD : Cor.
[21] M.v 1. 250.
[22] F 84 : Gu.
[23] Cat 167 : Cor 461.
[24] Cat 169 : Cor 463.
[25] See p ☐ above.
[26] See p ☐ above.
[27] See p ☐ above.
[28] Cor 529 : Cat 184 ; and Cor 534 : Cat 186.
[29] F 83 : Ma.
[1] This place, it must be remembered, is in Afganistan.
[2] This hoard should be attributed not only to region A but also to regions B, C and D as well.
[3] This entry includes a number of finds in regions A, B, C and D ; They are F 14 : Ch ; F 16, 17 : Mia*b*, F. 15 : Ab ; F 18 : Bi and F 13 : Kj*b*.

[30] See.
[31] F 14 : Ch : Cor. 503.
[32] F 16 : Mi*a* : Cor 502 ; F 17 : Mi*b* : Cor. 505.
[33] F 15 : Ab : Cor. 506.
[34] F 18 : Bi : Cor. 507.
[35] F 13 : Kj*b* : Cor. 522.
[36] See next sheet.
[37] F 27 : CC : Cor 544, 551.
[38] F 19 : Mp*a* : Cor 546–7 ; F 44 : Mp*e* : Co. 552.
[39] F 48 : Ki*a* : Cor. 541.
[40] F 93 : Ta : Cor 514.
[41] F : Md*a* : Cor. 556.
[42] F : MdD*a* : Cor 561, 582 ; F : MdD*c* : Cor 553 ; F : MdD*d* : Cor. 554.
[43] F 93 : Ta : Cor. 514.
[44] F 14 : Ch : Cor. 503.
[45] F : Kj : Cor 522.
[46] F 11 : Ud*a* : Cor 497, 499–502, 509–13, 515–21, 523.
[47] F 53 : Md D*b*.
[48] Sewell, (1904).
[49] I have been atleast five times in Madura and the suburbs collecting coins, but on no occasion did I succeed in procuring any of this species, in spite of vigorous search. Nor have my correspondents at Madura been luckier.
[50] H.W. Codrington, 32, 33.
[51] H.W Codrington, 33.
[52] H.W. Codrington, 33.
[53] Warmington, 120, too is of opinion that ' the evidence seems to contradict the idea of a Roman colony holding on in Madura '.
[54] Mattingly (1928), 255.
[55] Mattingly (1928), 255, citing Milne, (1926), 43.
[1] Cor. 1, 2.
[2] The other silver pieces were the Quinarius (a half of the denarius) and the Sestertius (a quarter).
[1] S.C., SENATUS CONSULTO, and Ex. S.C., EX SENATUS CONSULTO, 'by order of the Senate': Cor 73, 118, 158 and 303–8.
[2] Each of them styled himself III V I R ; see Cor. 11, 12, 14.
[3] They issued denarii bearing the legend AD. FRV, EMV, EX. S.C., AD FRUMENTUM EMUNDUM, EX SENATUS CONSULTO, ' for the purchase of corn, by order of the Senate.'
[4] Cor. 5, 10.
[1] Sulla, Cor. 7 ; Pompey, Cor. 15.
[2] Cor. 7, 22.
[3] For Julius Caesar as perpetual dictator, see Cor. 17, and for Mark Antony as one of the *iii viri reipublicae constituendae*, see Cor. 20.
[1] So, we have no specimens, in brass or copper, of Otho or Peyscennins Niger, who had not been recognised by the Senate as emperors.
[1] A half and an one-third of the solidus,— the semissis and the tremissis— were also in vogue, but were not issued regularly.
[2] The denominations were marked M, K, I, E,—they being respectively pieces of 40, 20, 10 and 5 nummia.
[1] Cor. 1, 2, 7.
[2] Cor. 3.
[3] For instance, Cor. 1.
[4] For instance, in Cor. 2, ' under cover of a reference to an ancestor, the famous C. Servilius Structus Ahala, who slew Spurius Maelius, the man who, by supplying cheap corn to the people, affected the crown, C. Serveilius applauds the murder of the second Maelius, Ti. Gracchus ': M. 57.
[5] They appear also on the obverse, as in Cor. 14.
[6] Cor 9.
[7] For instance, on Cor. 1, Q.CVRT is for Quintus Curtius, and M.SILA is for Marcus Julius Silanus : these two collaborated in issuing a joint silver coinage.
[8] In Cor. 3, Q.TERM. MF is for Quintus (Minucius) Thermus Marci Filius.
[9] For instance, Apollo, Diana and Venus ; Cor. 6, 10, 13.
[10] Cor 3, 7.
[11] Cor. 15.
[1] Cor. 16.
[2] For instance, Cor. 34.
[3] For instance, Cor. 54, 66.
[4] Cor. 1.
[5] Cor. 362–3 : IVPPITER CVSTOS.
[6] Cor. 445 : IOVI CONSERVATORI.
[7] Cor. 101, 333–5, 349.
[8] Cor. 6, 60–2.
[10] Cor. 450.
[11] Cor. 419.
[12] Cor. 63.
[13] Cor. 20, 479.
[14] Cor. 13, 26.
[15] Cor. 434 : VENERI GENETRICI.
[16] Cor. 60.
[17] Cor. 418–9.
[19] Cor. 545.
[20] Cor. 483.
[21] Cor. 435, 437.
[22] Cor. 404.
[16] Cor. 456.

[19] Cor. 245, for instance.
[20] Cor. 15, 18, 421, 451.
[21] Cor. 17, 398–9, f452.
[22] Cor. 335–6, 350–2, 461, 493.
[23] Cor. 4, 25, 37, 44, 49, 473, 534, 536, 543.
[24] Cor. 404; the genius of Lugdunum, Cor. 457; that of the Roman people, Cor. 514.
[25] M.
[26] Cor. 183–5, 194–200, 217–21, 235–6.
[27] Cor. 367, 443, 495.
[28] Cor. 562–3.
[32a] Cor. 558.
[33] Cor. 87–90, 262–6, 417.
[34] Cor. 44, 49, 519, 545.
[35] See
[36] Cor. 4.
[37] Cor. 549, 555.
[38] Cor. 369.
[38a] Cor. 373.
[39] Cor. 483.
[40] Cor. 393, 396.
[41] Cor. 424.
[42] Cor. 4.4.
[43] Cor. ..9–37.
[44] Cor. 427.
[45] Cor. 336–8.
[46] Cor. 423, 431–2.
[47] Cor. 407–8.
[48] Cor. 463.
[49] Cor. 536.
[50] Cor. 37.
[51] Cor. 386.
[52] Cor. 416: RESTITVTORI GALLIAE.
[53] Cor. 450.
[54] Cor. 6.
[55] Cor. 13.
[56] Cor. 411, 537.
[57] Cor. 514.
[58] S.C. or Ex. S.C.
[59] Cor. 40-4, 181, 397.
[61] Cor. 166–9, 178–80, 382, 389–90, 397, 480. The title 'Germanicus' became hereditary for a time, having been borne by Caligula, Claudius and Nero.
[60] Cor. 449, 474.
[62] Cor. 74–106, 392, 449, 452.
[63] Cor. 74–100, 291–4.
[63a] Cor. 74–100, 291–4.
[64] Cor. 217–27.
[65] This was done by employing additions such as 'Divi. F.', or incorporating the dead emperor's name in the new emperor's.
[68] For insignia he had standards, trophies, spears and shields.
[72] If, for instance, he returned from Africa the legend ran ADVENTUI AUG. AFRICAE.
[76] Numerals were added to indicate how often the vows had been paid.
[66] Cor. 65–6.
[67] Cor. 487–8
[69] See pp.
[70] Cor. 440, 459, 476.
[71] Cor. 68.
[73] Cor. 104–6.
[74] Cor. 209–13: DE GERMANIS; Gr. 234; DE BRITANN;
[75] Cor. 440.
Cor. 459.
Cor. 566.
[76] Cor. 424, 452.
[77] Cor. ..c.
[78] Cor. 2‥7–21.
[79] Cor. 019–57.
[81] Simpulum, lituus, tripod, patera; Cor. 286–90.
[83] The consecration was symbolised in types such as the temple, the altar, the eagle carrying the emperor's soul to heaven, the statue of the Divus, or an effigy of the emperor on a quadriga of elephants.
[82] Cor. 217–27.
[84] Cor. 68–72, 74–100, 101, 102–3, 104–6, 109–112, 118, 119–57, 160, 161–2, 164–5, 171–4, 166–9, 175–6, 177, 178–80, 183–5, 194–200, 217–21, 235–6, 255, 270–4, 283–4, 309–12. It is noteworthy that occasionally, as in the case of Antonia, the relative may be figured on both faces of a coin. Cor. 217–21.
[85] Cor. 442.
[86] Cor. 483.
[87] Cor. 427, 472.
[88] Cor. 465, 478.
[89] Cor. 472.
[90] See.

[21] Cor. 546, 559 : GLORIA ROMANORUM.
[22] Cor. 545 : SECVRITAS REIPVBLICAE.
[23] Cor. 474 : SECVRITATI PERPETVAE.
[24] Cor. 533 : BEATA TRANQVILLITAS.
[25] See.
[26] Cor. 466.
[27]-a Cor. 406.
[28] See
[29] Cor. 530–0, 535, 538–9.
[30] See.
[1] Cor. 444.
[2] Cor.
[3] Cor. 43.
[4] Cor. 393, 512.
[5] Cor. 25, 39, 427, 439, 472, 533, 565.
[6] Cor. 398, 452.
[7] Cor. 446, 450, 534.
[8] Cor. See
[13] Cor. 158, 201–4, 247–53, 496.
[14] Cor. 54.
[15] Cor. 45, 68, 501, 530, 535.
[16] See.
[17] Cor. 16.
[18] Cor. 5.
[19] Cor. 392.
[20] M.
[21] Cor. 7.
[22] The type is that of Trajan, seated on a platform, between officers, and granting diadems to three kings. The legend 'REGNA ADSIGNATA.' . . . . explains itself.
[23] See.
[24] Cor. 228–9.
[25] Cor. 891–3, 233.
[26] Cor. 07.
[27] Cor. 40, 34, 463, 532.
[28] See.
[29] Cor. 527–8.
[30] Cor. 527.
[31] Cor. 402.
[32] Cor. 66, 406, 424.
[33] Cor. 6.
[34] Cor. 8.
[35] Cor. 6.
[36] See.
[37] Cor. 527–8.
[38] Cor. 20, 479.
[39] Cor. 491 : INVICTVS.
[40] Cor. 531, 565–7, 570, 573.
[41] Cor. 565–7, 570, 573.
[42] Cor. 563.
[43] See.
[44] See.
[45] Cor. 565.
[46] Cor. 592–3.
[47] Cor. 567, 570, 573–4, for example.
[49] Cor. 5, for instance.
[50] Cor. 18, for instance.
[51] Cor. 6, for instance.
[52] Cor. 73, for instance.
[53] Cor. 424.
[54] Cor. 440, 541–2, 557, 565–6.
[55] See.
[56] Cor. 37, 376, 386, 406, 415.
[57] Cor. 413, 447, 458.
The legend may not allude to the journey, but the type is sufficiently explicit in some cases ; for instance, Domitian rides on a prancing horse, his cloak flying behind (Cor. 371) ; so too Hadrian (Cor. 412).
[58] Cor. 161–3.
[59] Cor. 368.
[1] Johnson, 428.
[2] Johnson, 431.
[3] Johnson, 433.
[4] See.
[5] See.
[6] Cor. 497, 518, 520–1.
[7] Cor. 509.
[8] Cor. 502, 515, 522.
[9] See.
[10] See.
[11] Cor. 512.
[12] Cor. 513.
[13] See.
[14] Cor. 497, 499–503.

INDEX TO FIND PLACES.

Abbreviation.	Find-place.	Find number.	Region
Ab	Allahabad	15	C
Al	Alamparai	9	F
Am	Amaravati	11c	E
At	Athirala	23	
Ba	Bamangachi	34	
Bi	Bindachal	18	C
Bl	Bangalore	57	F
Bo	Bombay	55	E
CC	Coromandel Coast ..	27	E, F
Ch	Chunar	14	C
CoD*a*	Coimbatore District, 1800.	4	F
CoD*b*	Do. 1817.	8	F
CoD*c*	Do. 1838.	22	F
CoD*d*	Do. 1863.	31	F
CoD*e*	*Do. 1912.	75	F
Cu	Cuddapah	33	
Cv	Chandravalli	73	F
Dh	Dharphul	25	E
Di	Dipaldinna	11*b*	E
Ga	Galparti	89	E
Gh	Ghanthasala	95	E
Gu	Gumada	84	E
Hi	Hidda	49	A
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In*b*	India (Office) — ..	41	A-F
In*c*	India	46*a*	A-F
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Ka	Kalikkanayakanpalaiyam ..	79	F
Kg	Kathanganni	76	F
Ki*a*	Kilakkarai, 1887	48	F
Ki*b*	Do. 1890	58	F
Kj*a*	Kanauj	12	C
Kj*b*	Do.	13	C
Kk	Karukkakurichi	65	F
Kl	Kallakina	74	F
Ko*a*	Kottayam, 1847	28	F
Ko*b*	Do. 1897	64	F
Kp	Kaliyamputtur	29	F
Kr*a*	Karur, 1806	7	F
Kr*b*	Do. 1856	30	F
Kr*c*	Do. 1878	35	F
Kr*d*	Do. 1904	70	F
KaD	Krishna Dt.	65	E
Kt	Kotpad	77	E
Ku	Kulattuppalaiyam ..	91	F
Kv	Kabu Valley	46*b*	A
Kv	Karivalamvandanallur ..	86	F
Ky	Kangayam	5	F
Ma	Malaiyadipudur	83	F
Mb	Mambalam	85	F
Md*a*	Madura, 1882	39	F

Abbreviation	Find-place.	Find number	Region
Md*b*	Madura, 1889	53*a*	F
Md*c*	Do. 1917 ..	80	E
MdD*a*	Madura Dt., 1889. .	52	F
MdD*b*	Do. . . 1889. .	53	E
MdD*c*	Do. . . 1894. .	61	F
MdD*d*	Do. . . 1894 .	63	F
Mi*a*	Mirzapur, 1832 ..	16	C
Mi*b*	Do. 1832 ..	17	C
Mk*a*	Manikyala, 1834 ..	21	A
Mk*b*	Do. 1885	45	A
Ml	Mallayapalaiyam. ..		
Mp*a*	Mahabalipuram, 1832	19	E
Mp*b*	Do. 1882 ..	38	F
Mp*c*	Do. 1884 ..	44	F
Mu	Muttra	94	C
MyS	Mysore State ..	43	E
Na	Nandyal	90	E
Nd	Nagdhara ...	54	E
Ne	Nellore	2	
OnT	Ongole Tk.	78	E
Oo	Ootacamund. ...	30	F
Po	Pakli. ...	66	A
Pe	Pennar	6	E
Po	Pollachi	3	F
Pu	Puthenkavu..	71	E
Ra	Rawalpindi ..	32	A
Re	Rewah	37	
Sa	Salibudam.	67	E
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SI*b*	Do. . . 1886	46	E
SI*c*	Do. . . 1902 ..	69	E
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Ve*b*	Do. 1891	59	F
Ve*c*	Do. 1932	87	F
Vi	Vidiyadurrapuram	47	E
Vk	Vinukonda	51	E
Wa	Waghode ..	56	B
Ya	Yo-swantpur	60	B